

Digital Public Administration and Regional Innovation in the Russian Agro-Industrial Complex: An Expert Assessment

*Onwusiribe Chigozirim Ndubuisi**, *Galina V. Astratova*

Ural Federal University named after the first President of Russia B. N. Yeltsin, Yekaterinburg, Russian Federation; *onwusiribe@urfu.ru

ABSTRACT

The systematic transition of public administration processes to a fully integrated digital platform that eliminates all forms of bureaucracy has become the foundation for the reform and growth of the Russian agro-industrial complex (AIC). However, the impact of this innovation on the innovation potential and competitiveness of enterprises remains understudied in both theoretical and practical terms. This study addresses this gap through a targeted survey of 30 agricultural operators in the AIC bureaucracy and testing hypotheses regarding the relationship between the use of digital public administration platforms, innovation, and performance. Using a sequential mixed-method research design integrating descriptive statistics and thematic content analysis, this study demonstrates that expert support for digitalization of governance through technology-enabled support programs has had a positive impact on innovation and competitiveness. However, structural barriers, such as high access thresholds to document management systems, digital inequality between regions, and temporary limitations of institutional capital, significantly influence these relationships. This study contributes to the literature on institutional theory, digitalization, innovation systems, and agricultural governance reform. The findings highlight the need for comprehensive and equitable digital administrative reform that goes beyond the simple electronic migration of existing bureaucratic processes. Historically, since the Soviet era, public administration in Russia's agribusiness was centralized following the rapid privatization of the 1990s and transitioned to a modern platform-based governance model, providing context for understanding the achievements and limitations of contemporary digitalization strategies. The digitalization of agricultural governance in Russia is characterized by state-led modernization, geopolitically driven import substitution, and a pressing need to protect the sovereignty of digital infrastructure. It offers valuable lessons for developing countries undergoing similar transformations.

Keywords: digitalization of administrative management, agro-industrial complex, innovation, competitiveness, public administration, Russia, platform management, digital transformation, expert assessment, import substitution, sovereign digital infrastructure, institutional evolution.

For citation: Onwusiribe Ch. N., Astratova G. V. Digital Public Administration and Regional Innovation in the Russian Agro-Industrial Complex: An Expert Assessment // Administrative Consulting. 2026. No. 3. P. 20–42. EDN THOIL

Цифровое государственное управление и региональные инновации в агропромышленном комплексе России: экспертная оценка

*Онвусирибе Ч. Н.**, *Астратова Г. В.*

Уральский федеральный университет имени первого Президента России Б. Н. Ельцина, Екатеринбург, Российская Федерация; *onwusiribe@urfu.ru

РЕФЕРАТ

Системный переход процессов государственного управления к полностью интегрированной цифровой платформе, устраняющей все формы бюрократии, стал основой для реформирования и роста агропромышленного комплекса (АПК) России. Однако влияние этой инновации на инновационный потенциал и конкурентоспособность предприятий остается недостаточно изученным как в теоретическом, так и в практическом плане. Настоящее

исследование восполняет этот пробел посредством целевого опроса 30 руководителей сельскохозяйственных предприятий АПК и проверки гипотез о связи использования цифровых платформ государственного управления, инноваций и результативности.

С помощью последовательного смешанного дизайна исследования, объединяющего описательную статистику и тематический контент-анализ, в работе показано, что экспертная поддержка цифровизации управления через технологически ориентированные программы поддержки оказывает положительное влияние на инновации и конкурентоспособность. Вместе с тем структурные барьеры — высокие пороги доступа к системам электронного документооборота, цифровое неравенство между регионами и временные ограничения институционального капитала — существенно влияют на эти связи.

Исследование вносит вклад в литературу по институциональной теории, цифровизации, инновационным системам и реформированию государственного управления в сельском хозяйстве. Результаты подчеркивают необходимость комплексной и справедливой цифровой административной реформы, выходящей за рамки простого электронного переноса существующих бюрократических процессов. Исторически, начиная с советского периода, государственное управление в агробизнесе России было централизованным; после стремительной приватизации 1990-х гг. оно перешло к современной платформенной модели управления, что задает контекст для понимания достижений и ограничений современных стратегий цифровизации. Цифровизация управления сельским хозяйством в России характеризуется модернизацией под руководством государства, геополитически обусловленным импортозамещением и насущной необходимостью защиты суверенитета цифровой инфраструктуры. Это дает ценные уроки для развивающихся стран, проходящих аналогичные преобразования.

Ключевые слова: цифровизация административного управления, агропромышленный комплекс, инновации, конкурентоспособность, государственное управление, Россия, платформенное управление, цифровая трансформация, экспертная оценка, импортозамещение, суверенная цифровая инфраструктура, институциональная эволюция.

Для цитирования: *Онвусирибе Ч. Н., Астратова Г. В.* Цифровое государственное управление и региональные инновации в агропромышленном комплексе России: экспертная оценка // Управленческое консультирование. 2026. № 3. С. 20–42. EDN THOIII

1. Introduction

In the modern era, this transition from a paper-based public administration system to a digital platform remains the most structurally significant governance reform [41, p. 3; 17, p. 479].

The agricultural sector is tightly integrated into a complex regulatory environment, and reforms have a number of specific implications: when the administrative digital infrastructure through which financial support such as grants and subsidies, regulatory controls such as licenses and permits, compliance checks, and interagency partnerships are delivered shifts from physical queues and paper documents to integrated digital portals, multidimensional consequences for agribusiness behavior, incentives for innovation, and productivity arise [57, p. 4; 42, p. 63].

The Russian agro-industrial complex provides a compelling empirical case for understanding the transition to digital governance in a competitive environment, as it is one of the world's largest agricultural producers and the state exercises significant regulatory and financial influence over the sector. In 2019, the federal government implemented the “Digital Agriculture” strategy to accelerate the integration of information and communication technologies across the entire agricultural value chain [24, p. 256; 31, p. 435; 60, p. 278]. In addition to the reform of the administrative system, digitalization has also affected the production side with significant implementation of precision farming, Internet of Things (IoT) sensors, artificial intelligence, unmanned technologies,

and robotics [23, p. 201; 13, p. 158–159]. Importantly, the reform of public administration processes through digital platforms regulating business registration, distribution of state support, regulatory reporting and interdepartmental coordination is the basis for the effectiveness of the Russian agro-industrial complex [51, p. 70].

This study is based on a governance-oriented approach to digitalization. Theoretically, institutional arrangements are the foundation of administrative digitalization in terms of changing the rules, incentives, and transaction costs that determine firms' decisions to adopt digital innovations, rather than the pass-through productivity-enhancing effects [47, p. 25; 50, p. 112; 1, p. 78]. From a policy perspective, there is evidence that digital innovation in manufacturing remains concentrated among large agricultural enterprises, while small and medium-sized enterprises have unequal access to such innovations, and it is argued that digital administrative platforms provide equal leverage for growth, which will lead to the industry-wide competitiveness benefits that policymakers seek [39, p. 1142].

The evolutionary trend of public administration in Russia, particularly in agriculture, provides a crucial context for a deeper understanding of digital governance. The centralized policy of the Soviet era, which is the legacy that laid the foundation for the institutional model, is characterized by top-down directive control, extensive document flow requirements, and limited enterprise autonomy [44, p. 2; 59, p. 3]. The privatization period of the 1990s introduced market mechanisms but simultaneously fragmented administrative capacity [10, p. 3; 67, p. 22]. The early and mid-2000s saw a consolidation of administrative processes within federal programs, while geopolitical pressure after 2014 demanded import substitution and sovereign technological development [24, p. 260; 32, p. 8].

It should be emphasized from the outset that digital administration in the Russian AIC is not limited to the electronic delivery of state support measures. Daily compliance with requirements, traceability, and the eligibility of enterprises for support are currently ensured by a portfolio of mandatory industry-specific federal state information systems: the Unified Federal Geographic Information System of Agricultural Lands (UFGEIS ZSN), FGIS "Grain", FGIS "Saturn" (pesticides and agrochemicals), and FGIS "Seed Production" — interdisciplinary administrative systems (AIS "Subsidies of the AIC", GIS "IAS NTOR-SKh", GIS "Single Window") and the Unified Digital Platform of Agro-Industrial and Fisheries Complexes (EDP APK / ECP APK), which is currently under development [40, p. 4; 24, p. 258; 31, p. 438]. The empirical focus of this article is narrower: it examines how experts assess the electronic delivery of government support instruments — subsidized loans, subsidies, grants, tax incentives, and technology programs — as one particularly important aspect within this broader ecosystem. The broader FGIS architecture and EDP APK are examined as the institutional backdrop that shapes the transaction costs, documentation burden, and regional inequalities documented in the survey responses.

In this context, the study addresses three research questions:

RQ1: How do experts in the agro-industrial complex assess the impact of digitalization of administrative management on the innovative potential of Russian agro-industrial enterprises?

RQ2: What is the expected effectiveness of government digital technology support programs in increasing the competitiveness of small and medium-sized agricultural enterprises (SMEs)?

RQ3: Do structural barriers influence the relationship between digitalization of administrative processes and innovation/competitiveness outcomes?

Three corresponding hypotheses are put forward:

H1: The innovative potential assessed by experts is positively associated with the digitalization of management in the Russian agro-industrial complex.

H2: Technology-focused government support programs have a stronger impact on enterprise competitiveness than non-technology-based financial instruments.

H3: Structural barriers, such as document complexity, regional inequality, and time constraints on capital raising, significantly reduce the positive effects of administrative digitalization.

2. Literature review

2.1. Historical evolution of public administration in Russian agriculture

Agricultural management during the Soviet era was characterized by centralized planning, state ownership, and a complex bureaucracy that managed production as a result of collectivization in the 1930s [32, p. 8]. State and collective farms historically had a strong bureaucratic structure, including strict planning and an extensive paperwork process in regional administrations [12, p. 2]. The hierarchical system created an enormous paperwork burden on enterprises, but ensured administrative consistency [57, p. 4; 16, p. 108].

Institutional fragmentation resulted from the collapse of the Soviet Union in 1991; unfortunately, the privatization of agro-industrial enterprises during that period did not lead to the creation of effective market regulation institutions [31, p. 3]. In the 1990s, agroholdings began to grow through the consolidation of former state-owned enterprises. At the federal and regional levels, administrative capacity was significantly reduced, as the number of personnel in the ministries of agriculture decreased by approximately 60 % between 1991 and 1998 [12, p. 2; 66, p. 20].

In the 2000s, administrative reconstruction became a priority for the federal government. The 2006 Federal Law “On the Development of Agriculture” laid the foundation for state support programs [61, p. 4]. During this period, administrative processes remained largely paper-based, as businesses had to submit paper documents, and decision-making took weeks or months. Differences in the quality of governance emerged: municipalities created more effective bureaucratic structures, while rural areas faced a shortage of officials [49, p. 5; 42, p. 65].

Since 2014, the trajectory of governance in agriculture has changed due to rising geopolitical tensions. These tensions necessitated an import substitution strategy due to the loss of access to foreign agricultural resources, while the need to ensure food security became a matter of national security, making agriculture a priority [32, p. 8; 11, p. 75]. Subsequently, state and regional programs have placed significant emphasis on technological modernization and digital transformation as tools for building sovereign capacity, in particular, the 2015 Food Security Doctrine formalized this priority [24, p. 258; 62, p. 12].

2.2. Digitalization of administrative management: institutional foundations

Some e-government researchers have focused on the replacement of paper documents with electronic equivalents [25, p. 101; 19, p. 78], while other scholars have focused on the transformative capacity of digital platforms to reorganize the basic logic of government–enterprise interactions [41, pp. 2–3; 63, p. 34]. In contrast, scholars in the field of institutional economics have come to agree that digitalization provides a platform for the integration of formal and informal rules governing resource allocation [47, p. 27; 1, p. 82].

This institutional development work is particularly relevant for the development of the agricultural sector, where public administration decisions directly shape the conditions under which businesses decide whether, when, and how to implement innovations [61, p. 7; 64, p. 155]. The question that arises in the transition to a digital administrative process is whether it significantly reduces transaction costs, waiting times, and expands access for small businesses, or whether it reproduces existing administrative bottlenecks

in electronic form, maintaining what Mitrofanova et al. call the “transformational digital divide” [42, p. 63; also 58, p. 146].

The school of thought based on the resource approach [5, p. 105; 37, p. 8; 38, p. 250] offers an additional perspective, according to which firms with greater access to administrative resources provided by the state have a competitive advantage over small firms with limited access. Innovation systems theory [37, p. 8; 38, p. 250] views state institutions as co-producers of innovative potential. The quality of administrative digitalization determines whether the state will function as an effective innovation partner or whether this will lead to institutional frictions [55, p. 98; 48, p. 215].

2.3. Federal Program “Digital Agriculture”

The most developed digital structure in Russia is the departmental project “Digital Agriculture” (2019–2024), a comprehensive government initiative aimed at integrating digital technologies throughout the agricultural sector [31, p. 438; 24, p. 258; 15, p. 6]. The project envisages the digitalization of state support services through a “single window” portal, the creation of a digital platform for data exchange in the agricultural sector, the improvement of digital skills through training programs, and the provision of administrative support for the digitalization of production [6, p. 4].

The onset of geopolitical pressure revealed Russia’s dependence on foreign agricultural technologies, which necessitated the strategic strengthening of its sovereign technological potential [24, p. 262; 43, p. 65]. Federal-level policy is focused on domestic technologies, including integration with the national GosTech platform [31, p. 438; 29, p. 126].

However, a number of limitations remain. Some studies note that certain digital portals have not fundamentally simplified documentation requirements [42, p. 66; 33, p. 163]. Regional differences also persist, causing some businesses to lag in competitiveness due to connectivity issues and staffing shortages in support centers [24, p. 264; 65, p. 4]. Furthermore, some businesses report the need to use their working capital to obtain reimbursement despite digitalization [51, p. 74; 53, p. 139].

2.4. Mandatory federal state information systems and the Unified Digital Platform for the Agro-Industrial Complex

In addition to the departmental “Digital Agriculture” project, the operational architecture of administrative digitalization in the Russian agro-industrial complex is built on a portfolio of mandatory industry-specific federal state information systems (FGIS), which form the day-to-day procedures for compliance, tracking, and determining eligibility for support for enterprises. The Unified Federal Geographic Information System of Agricultural Lands (EFGIS ZSN), in effect since 2020, provides the basis for the land cadastre for monitoring agricultural land use and state support, linked to parcel-level data. The FGIS “Grain”, mandatory since 1 September 2022, tracks every batch of grain and its processed products from harvest to final consumption. The FGIS “Saturn” records the turnover of pesticides and agrochemicals for the same period, while the FGIS “Seed Production”, launched on 1 September 2024, tracks seeds and planting material throughout the entire value chain. These systems are interconnected legally (Article 17.1 of the Federal Law “On Grain”; Part 15 of Article 21 of the Federal Law “On Seed Production”) and technically through SMEV and open APIs, creating a de facto “FGIS ecosystem” whose combined requirements determine whether an enterprise can legally operate, sell products, and qualify for state support [24, p. 259; 31, p. 438; 45, p. 4].

In addition to these sectoral tracking systems, the distribution and monitoring of state aid are supported by two end-to-end administrative platforms. The AIS “Agro-Industrial Complex Subsidies” is an automated information system used by the Ministry of Agriculture to distribute federal subsidies to regional executive bodies and final beneficiaries; it serves as an internal channel for many instruments, the effectiveness

of which is assessed by experts in Section 4 below. The GIS “IAS NTOR-SKh” — the information and analytical system for scientific and technical support of agriculture — directs research, consulting, and technology transfer services to this sector. Together with the GIS “Single Window”, these channels support most of the grant, subsidy, and concessional lending instruments analyzed in the empirical section of this article [40, p. 4; 51, p. 71].

A unifying initiative currently under development is the Unified Digital Platform for Agro-Industrial and Fisheries Complexes (EDP APK / ECP APK), which is designed to unite the aforementioned FGIS systems, subsidy distribution systems, and analytical systems into a single entry point with authentication through the Unified Identification and Authentication System (ESIA / Gosuslugi). Launched in stages from 2024 and planned for full-scale implementation from 1 March 2026, the EDP APK is expected to become both the data basis for management decision-making at the federal, regional, and municipal levels, and the main interface for agricultural enterprises [40, p. 4; 24, p. 258; 31, p. 438]. Its ultimate effectiveness will determine whether the “transformational digital divide” identified in this study [42, p. 63] will be narrowed or simply replicated at a higher technological level. Since the EDP APK was still under development at the time of the study, the empirical part of this article evaluates the electronic delivery of government support instruments as a standalone but representative fragment of the broader platform architecture.

2.5. Results of digitalization: empirical data

Digitalization has demonstrated significant productivity benefits. Chuvakhin, having analyzed 450 enterprises for 2022–2024, reported an increase in labor productivity by 24.8 % and a decrease in operating costs by 18.6 %, while the correlation between digitalization and economic indicators was $r = 0.776$ [13, p. 157]. Germanchuk et al., having analyzed 1,347 enterprises in 18 regions, found an increase in technical efficiency by 23.4 % and labor productivity by 18.7 % [20, p. 51; also 23, p. 205].

However, according to a recent report, only 40 % of enterprises use artificial intelligence, and the availability of digital data at the national level is about 13 % [24, p. 260; 26, p. 15]. Mitrofanova et al. and others identify a multi-level “digital divide” covering industry, personnel, and transformation aspects [42, p. 63]. The implementation of digital accounting is widespread in large agricultural enterprises, while small and medium-sized enterprises face difficulties [30, p. 48; 30, p. 52; 4, p. 15].

The geopolitical situation after 2022 complicates cybersecurity and is a key factor in sovereign technological development [24, p. 265; 69, p. 8]. Kopteva and Romanova confirmed that geopolitics poses a threat to food security and opportunities for domestic innovation through accelerated support and policies [32, p. 11; 21, p. 86].

2.6. Platform management and small and medium enterprises

The implementation of various digital platforms to improve the administrative efficiency of government agencies has received theoretical support, ranging from Max Weber’s theory of bureaucracy to institutional theory [63, p. 38; 27, p. 6]. For domestic agro-industrial enterprises, digital platforms — online subsidy portals, digital service extensions, e-commerce, integration and compliance with regulatory platform requirements — significantly reduce transaction costs and provide small and large enterprises with equal access to public services [6, p. 5; 45, p. 4; 54, p. 145; 28, p. 3]. However, regional digital divides — the results of access to administrative appeals and digital platforms — mean the need to go beyond equitable access and ensure transparency in the provision of public services [42, p. 63; 58, p. 149]. Astanukulov et al. emphasize the lagging physical infrastructure, which hinders the development of even digitally oriented enterprises [3, p. 7; also 56, p. 3].

2.7. Theoretical synthesis

The theoretical framework of this study is based on Max Weber's theory of bureaucratic governance, according to which enterprises must follow strict rules for accessing public services, as well as on institutional, resource-based and innovation system theories. This is explained by the fact that the digitalization of public services promotes transparency, accountability and equality. From the perspective of institutional theory, the digital governance platform facilitates access to public support services for both small and large corporations [47, p. 30; 50, p. 115], while the resource-based theory ensures equal access to public support services and increases accountability, considering digital administrative access as a potential source of competitive advantage [37, p. 12; 38, p. 255], and in an innovation system, information exchange and administrative processes become simple and efficient, positioning the state as a co-producer of innovation potential [37, p. 12; 38, p. 255].

This concept supports the main thesis of the forecast: the impact of administrative digitalization is mediated by conditions of institutional quality in terms of accessibility, consistency, regional fairness, and procedural simplicity. These conditions are important for promoting innovation and competitiveness; where they are absent, access to administrative digitalization reproduces or even reinforces existing exclusions [42, p. 67; 57, p. 7].

The presented Russian model of administrative digitalization is unique, as it represents the development of state platforms such as Gosuslugi, Active Citizen, GosTech, and the federal portal for draft regulatory legal acts. This is the result of the prioritized use of sovereign technological potential and integration with broader state information systems [31, p. 436; 40, p. 4].

3. Methodology

3.1. Research design

Quantitative analysis was used to analyze the survey data, and qualitative thematic content analysis was used to analyze the free-form responses, which involves a sequential explanatory mixed-method approach [14, p. 65]. This method is robust because it combines systematic measurability with contextual depth appropriate to the research questions, which address both the degree and nature of attitudes perceived by experts [9, p. 634].

3.2. Survey instrument

The instrument consists of 12 main modules and 10 demographic items, grouped into five analytical themes derived from the literature review: (1) knowledge of and participation in government support programs; (2) effectiveness of financial support programs; (3) perceived impact of technological support programs on competitiveness; (4) barriers to accessing support; and (5) impact of the sanctions environment. The questionnaires contained multiple-choice questions on a five-point Likert scale [36, p. 25], with response options ranging from "no influence" to "very strong influence" or from "not at all effective" to "very effective", depending on the context of the question. The questions were administered electronically in October and November 2025.

3.3. Sampling and sample profile

In this study, a purposive sampling strategy, in accordance with the principles of expert research, was used to identify participants among direct practitioners in the Russian agro-industrial complex [7, p. 62]. The inclusion principle is that the expert should have at least: (1) three years of professional experience in the Russian agro-industrial complex and (2) either recently worked in a managerial position in an enterprise directly related to

agriculture or agroconsulting, or was involved in the implementation of policies directly related to their respective sector; and (3) be familiar with government support programs. The number of experts interviewed was $N = 30$, which exceeded the minimum threshold defined for achieving “thematic saturation” in the expert interviews studied [22, p. 74].

The demographic composition of the experts surveyed includes: 69.0 % men ($n = 20$), 31.0 % women ($n = 9$); average age 28–37 years (37.9 %, $n = 11$); 37.9 % ($n = 11$) reported 6–10 years of experience in the industry. Experts from Yekaterinburg, Kazan, Shadrinsk, and numerous unnamed federal districts of Russia represent a variety of regional contexts.

3.4. Data analysis

In accordance with established practice in conducting expert surveys, quantitative analysis was used to calculate frequency distributions and percentage ratings for all Likert scale items. Responses were combined into three analytical categories for greater clarity of interpretation: “low” (a combination of “no influence” and “weak influence”), “moderate” (including “moderate influence”), and “high” (a combination of “high influence” and “very high influence”) [52, p. 89]. To test the first and second hypotheses in the comparative frequency analysis, the proportion of “high” responses was used as the primary indicator for comparing technology-focused programs with financial aid programs.

Thematic content analysis according to Braun and Clarke’s six-step framework [8, p. 87] was conducted through familiarization, initial coding, theme search, theme review, theme definition, and article writing. Free-form responses were analyzed inductively, with codes formed based on the respondent’s language rather than on predetermined categories. High agreement was achieved between the two independent coders (Cohen’s kappa coefficient = 0.81), indicating considerable agreement [35, p. 165].

3.5. Methodological rigor

To assess construct validity, a pilot test was conducted with three experts, based on a rigorous instrument design with a theoretical framework that allows for the identification of ambiguous formulations. Internal validity was enhanced through researcher triangulation and expert review, and preliminary results were presented to five respondents for verification. Purposive sampling limits external validity, as results are analytically generalized to theory rather than statistically to the entire population [68, p. 129]. The research instrument was developed with consideration of government support for the digitalization of administrative management (preferential lending, subsidies, grants, tax incentives, technological programs, and the electronic document management that supports them), rather than industry-specific tracking obligations created by the FGIS “Grain”, FGIS “Saturn”, FGIS “Seed Production”, and EFGIS ZSN systems, or the EDP APK integration logic. Therefore, a specific follow-up study using the developed instrument is required to assess the compliance with these industry systems and the transition costs they impose on SMEs.

4. Results

4.1. Awareness of the program and its use

Awareness of government assistance programs is almost universal among respondents: 86.2 % ($n = 25$) confirm clear knowledge of available government support mechanisms. This high level of awareness provides the basis for a meaningful assessment of program effectiveness, as respondents have sufficient information to form informed judgments.

Regarding implementation schemes, a significant portion of respondents use preferential loan and grant programs, while some participants receive annual grants for specific

developers. When asked which outcomes government support has the most significant impact on, 55.2 % (n = 16) supported all four aspects: improved access to working capital, reduced operating costs, stimulating investment, and ensuring sustainability, indicating widespread recognition of the comprehensive impact of support among those experienced in program implementation.

4.2. Expected performance of financial instruments

Table 1 presents expert assessments of five financial support instruments available to Russian agricultural enterprises.

A significant percentage (69.0 %) of respondents consider subsidized lending more effective than other instruments, significantly higher than for any other financial mechanism. These results demonstrate the direct access and transactional nature of credit support compared to more administratively complex instruments [51, p. 73].

Experts point out that targeted subsidies and preferential taxation were not as effective as expected: 65.5 % and 69.0 %, respectively, rated them as somewhat effective or ineffective. These results are consistent with academic research examining the systemic fragmentation of subsidy distribution and the disproportionate benefits of large holdings, while a large number of small businesses lack similar access [34, pp. 75, 82].

Experts concluded that grants awarded to small businesses and innovators did not achieve their maximum potential, despite access to a digital platform designed to simplify the administrative process. Grants for innovators demonstrated slightly better results

Table 1

Evaluation of the effectiveness of financial support instruments (N = 30)

Tool	High efficiency (%)	Moderate efficiency (%)	Low / zero efficiency (%)
Preferential lending	69.0 (n = 20)	3.4 (n = 1)	27.6 (n = 8)
Targeted subsidies	27.6 (n = 8)	6.9 (n = 2)	65.5 (n = 19)
Preferential taxation	24.1 (n = 7)	6.9 (n = 2)	69.0 (n = 20)
Grants (for small businesses)	27.6 (n = 8)	0.0 (n = 0)	72.4 (n = 21)
Grants (for innovators)	37.9 (n = 11)	0.0 (n = 0)	62.1 (n = 18)

Source: Compiled by the author.

Table 2

Assessment of the impact of technology programs on competitiveness (N = 30)

Measurement	High impact (%)	Perceived impact (%)	Minimum impact (%)	High + perceived combined (%)
Improving the use of digital technologies	51.7 (n = 15)	41.4 (n = 12)	6.9 (n = 2)	93.1
Expanding market coverage	65.5 (n = 19)	34.5 (n = 10)	0.0 (n = 0)	100.0
Improving competitiveness	20.7 (n = 6)	75.9 (n = 22)	3.4 (n = 1)	96.6
Communication capabilities	34.5 (n = 10)	37.9 (n = 11)	27.6 (n = 8)	72.4
Business efficiency	17.2 (n = 5)	51.7 (n = 15)	31.0 (n = 9)	68.9
Technical level	17.2 (n = 5)	51.7 (n = 15)	31.0 (n = 9)	68.9

Source: Compiled by the author.

(37.9 % effectiveness) than standard grants for small businesses (27.6 % effectiveness). This minor difference can be explained by the effectiveness of government regulation in monitoring and overseeing the regulation and commercialization of inventions.

4.3. Testing H1: digitalization and innovation

The expert opinions presented in Table 2 show how government agencies using modern technologies enable businesses to access support programs in six areas, thereby testing the first hypothesis.

The scale of technology implementation in public administration, coupled with high and tangible feedback, attracts significant support from most enterprises, ranging from 68.9 % (business efficiency and technical level) to 100 % (expansion of market coverage).

The assessment of the use of digital administrative platforms for obtaining support and regulatory compliance under the “increasing competitiveness” section is particularly noteworthy: although only 20.7 % rate this impact as “high”, 75.9 % report a “significant impact”, leading to a significant overall positive assessment of 96.6 %.

In the first quarter, which focused on the impact of digitalization of administrative processes on company operations, 41.4 % of respondents confirmed the full range of benefits (all four results were positive), while another 31.0 % identified three or more advantages of digital administrative platforms. Importantly, not a single respondent reported exclusively negative consequences of digitalization initiatives.

These results convincingly support hypothesis H1. According to experts, the digitalization of administrative processes is consistently associated with positive innovation outcomes across many areas and has had a particular impact on the implementation of government policies to support increased competitiveness in the industry.

4.4. Testing H2: comparing technology with financial instruments

Hypothesis H2 predicted that technology-focused government support programs would have a stronger impact on enterprise competitiveness, according to participants, than non-technology-focused financial instruments. To test this hypothesis, this study compares the average “high impact / effectiveness” ratings for both types of programs.

For technology programs, the average “high impact” score across the six parameters is 34.5 % (range: 17.2 % to 65.5 %). The combined average “high + significant impact” score is significantly higher at 79.7 % (range: 68.9 % to 100 %), indicating that while experts may award the digital administrative platform the highest categorical rating, they consistently recognize its significant positive impact on enterprise competitiveness.

In the case of state support using financial instruments, the average “highly effective” rating across the five instruments is 37.2 %. However, this figure is significantly inflated by preferential lending (69.0 %). Excluding preferential lending, the average response rate dropped to 29.3 %, which is lower than the average for the technology program (34.5 %). The rates for providing grants to small businesses (27.6 %) and preferential tax rates (24.1 %) are significantly lower than the average for the technology program.

A comparative analysis partially supports hypothesis H2. According to expert assessments, technological programs outperform most financial instruments, confirming the hypothesis. However, the exceptional effectiveness of concessional lending (69.0 %) indicates that these two methods (financial and technological) complement each other rather than simply replace financial and technological support mechanisms. As one respondent put it:

“Concessional lending provides working capital for investments in digital technologies, but technology programs teach us how to use them effectively. We need both”¹.

¹ Excerpt from an expert interview on preferential lending and digital administrative platforms.

This understanding is consistent with theoretical expectations about the complementarity of access to capital and technological potential, rather than competing policy instruments for improving governance efficiency [13, p. 158; 20, p. 53].

4.5. Testing H3: structural barriers

Hypothesis H3 predicted that structural barriers such as document complexity, regional inequality, and time constraints on raising capital would significantly impact the positive impact of digitalization in administrative governance. An analysis of question Q8, in which respondents identified a variety of different types of barriers to accessing government support, reveals a striking overlap: 48.3 % (n = 14) simultaneously identified all six of these structural barriers, indicating systemic rather than isolated constraints to effective digital governance.

A thematic analysis of the free-form responses reveals four distinct but interrelated themes:

Topic 1 — The challenges of using documentation as a digital exception.

Approximately 89 % of barrier statements included this structural theme, which can be defined as “electronic documents” — digital platforms that have a similar volume and complexity of documentation required under a paper-based system. One respondent explained:

“We send documents electronically instead of on paper, but the volume of documents remains the same. The platform hasn’t reduced the workload — it has simply changed the format”².

This finding directly refutes the assumption that digitalization automatically simplifies administrative processes and that full access to digital administration makes it effective, confirming the concept of the “transformational digital divide” of Mitrofanova et al. [42, p. 66].

Topic 2 — Regional digital divide. Experts from regions outside the metropolis consistently reported the platform’s practical inaccessibility, despite its official accessibility. As one participant from a regional enterprise noted:

“Our local agricultural administration lacks staff trained to use digital platforms. We manage complex systems ourselves, while businesses in Moscow receive specialized support from specialists”³.

This theme is consistent with documented regional differences in digital infrastructure and human capital, which affect equal access to government support instruments [24, p. 264; 65, p. 5].

Topic 3 — Selectivity of competitions and bias toward large enterprises. Many respondents explained that grant competitions systematically favor companies with a history of successful support, creating a cumulative advantage for large investors. Here is a typical comment:

“Grant competitions are won by companies that already have experience receiving grants. They know how to write applications and navigate the system. New innovators can’t compete”⁴.

This observation echoes the findings that experience in administrative processes provides an advantage in determining market concentration in the Russian agro-industrial complex [34, p. 80; 11, p. 78].

Topic 4 — The paradox of working capital and time. According to this concept, administrative barriers force companies to spend their working capital before receiving compensation:

² Expert response to a question on document workflow under digital administrative platforms.

³ Expert response to a question on the regional digital divide.

⁴ Expert response to a question on financial support via the digital administrative platform (grant competitions).

“To get support, we must first spend money we don’t have. By the time payments arrive in a few months, we may already be taking out expensive commercial loans to cover the deficit. This is a policy problem that digitalization cannot solve”⁵.

This paradox persists despite platform administrative systems, indicating the limitations of digital solutions for effective state financial support [51, p. 74; 53, p. 140]. These results support hypothesis H3.

4.6. Geopolitical situation

Regarding the impact of geopolitical pressures after 2022 on agricultural enterprises, expert responses are divided into four categories: 34.5 % (n = 10) report a slight deterioration in performance; 27.6 % (n = 8) report a significant deterioration; 20.7 % (n = 6) report no significant impact; and 13.8 % (n = 4) describe geopolitical pressure as an incentive for development.

The nature of the experts’ responses has theoretical significance. The minority describing geopolitical pressure as a stimulus for innovation, reinforced by the digital administrative structure (13.8 %), reflects the dynamics of import substitution documented in the political science literature [32, p. 15; 21, p. 87]. The large proportion of decline reports (62.1 % overall slightly/significantly worsened) reflects the vulnerability of digital infrastructure as a restrictive regulatory framework identified in previous studies [24, p. 265]. As one respondent noted:

“When Western software disappeared, we lost critical farm management and accounting systems. This taught us the importance of sovereign digital infrastructure, but the transition was painful”⁶.

4.7. Needs for collaborative innovation

Regarding the tools necessary for effective collaboration between agricultural enterprises and scientific and technological partners, 34.5 % (n = 10) suggested several mechanisms. Notably, “innovation culture” appeared in 96.6 % of responses, indicating that behavioral and organizational factors are perceived as equally important as technical factors and decision-making systems. One respondent expressed the following opinion:

“We have platforms and technologies. We have funding programs and tax incentives. What we lack is a culture that encourages experimentation and recognizes that some innovations will fail. This cultural gap is the most difficult obstacle to overcome”⁷.

This finding indicates that, in addition to structural barriers, institutional and behavioural aspects of innovation potential influence the architecture of public policy [59, p. 5].

5. Discussion

5.1. Digitalization of administrative management as an institutional lever

The available evidence confirms that digitalization of administrative management functions as an institutional lever that improves the efficiency of agro-industrial complexes in the context of hostile geopolitical policy, which makes innovative decision-making critical [37, p. 15; 38, p. 255]. The strong support of experts for hypothesis H1, especially the combined positive assessment of 93.1 % for the adoption of digital technologies and 96.6 % for increased competitiveness, indicates that platform-based administrative systems are perceived as having a significant impact on the behavior and performance of firms.

⁵ Expert response to a question on bureaucratic obstacles and government financial support.

⁶ Expert response to a question on geopolitical pressure.

⁷ Expert response to a question on innovation culture and collaboration with scientific and technological partners.

However, the nature of the responses is diagnostic, as it allows us to identify the role of an effective government mechanism in increasing the resilience of enterprises. The predominance of concessional lending (high efficiency, 69.0 %) among government financial support programs, contrasting with the consistently lower ratings of more complex programs, sheds light on institutional dynamics: from the perspective of transaction cost theory [47, p. 32], this preference reflects an environment of low institutional trust in small businesses, where transparency and predictability of value are more important than program complexity. Concessional lending with clear eligibility criteria and predictable payments inspires more trust than competitive grant programs, which imply unclear administrative processes and high transaction costs for small businesses [34, p. 82].

This understanding of the sequence of actions is particularly relevant given Russia's institutional trajectory. The Soviet era was burdened by unclear decision-making processes, and arbitrary administrative practices generated a persistent mistrust of bureaucratic processes [16, p. 108; 66, p. 24]. Digital administrative platforms that ensure clear, timely, and predictable implementation of public policy more effectively advance the purposeful legacy of the Russian Federation than platforms that simply digitize complex competitive processes while retaining elements of arbitrary governance.

5.2. Complementarity, not competition

Partial support for hypothesis H2 reveals a more complex relationship between financial and technological support than initially assumed. Although financial support for technology adoption is more effective than financial support alone, the exceptional results of concessional lending suggest that companies require both capital and capabilities to turn digitalization into a competitive advantage with clearly defined government support. This dynamic is consistent with findings that the greatest efficiency gains from digitalization are observed in regions with developed IT infrastructure and adequate financial support [20, p. 55; 13, p. 158].

For policymakers, this argues against separating financial and technical support into separate programs. Integrated platforms that facilitate access to credit, technical training, and regulatory compliance through unified interfaces, such as Gosuslugi, generate greater innovation impacts than parallel but separate programs [31, p. 437; 54, p. 148]. Another good example of an integrated platform for institutionally related support, albeit commercial rather than government-based, is Rosselkhozbank's digital ecosystem "Svoje. Fermerstvo", one component of the broader "Svoje" ecosystem, which also includes the "Svoje. Rodnoye" farmer-consumer marketplace and related consumer-focused platforms. This ecosystem represents a promising model in the complementary, commercial direction [18, p. 5].

5.3. Obstacles and limitations of platform management

The overwhelming support for hypothesis H3, with 48.3 % of respondents simultaneously endorsing all six structural barriers, and the thematic analysis showing the interrelationships between these constraints, call into question the "digitalization equals modernization" narrative promoted in political discourse [41, p. 8]. The Russian agro-industrial complex has largely created a sovereign digital platform to support government policy.

The persistent problems with documentation on digital platforms confirm that simply converting paper-based processes to electronic interfaces is not an administrative reform. This phenomenon, which can be called "electronic documentation", maintains bureaucratic burdens while simultaneously expanding technological access and potentially creating a process that excludes companies lacking digital competencies [58, p. 148; 33, p. 162].

Inequalities in regional access to digital policy support platforms, particularly in the absence of local administrative capacity to support the platform, mean that formal access to national systems does not provide full access for regional enterprises [24, p. 264; 65, p. 6]. This finding highlights the need to advance digitalization strategies alongside investments in regional administrative capacity — a lesson applicable beyond Russia.

5.4. Geopolitical pressure and digital resilience

Russia's response to geopolitical pressure — accelerated development of domestic platforms and a mandatory transition to sovereign digital infrastructure — represents a unique approach to ensuring digital resilience. For developing countries, including Nigeria, this serves as both a warning (dependence on foreign platforms creates structural vulnerabilities) and a model (building domestic capacity can be critical to long-term resilience) [2, p. 215; 46, p. 312].

5.5. Towards a differentiated theory

This study proposes a differentiated model of the impact of administrative digitalization. The relationship between digitalization and innovation/competitiveness outcomes is heterogeneous and is determined jointly by three conditions of institutional quality. This is because the degree of actual availability of digital platforms varies significantly across company sizes, subsectors, and geographic regions, as digitalization creates a concentration effect rather than sector-wide benefits [42, p. 68].

Secondly, the extent to which digitalization truly simplifies administrative procedures, rather than simply converting paper documents into electronic format, is crucial. Platforms that maintain bottlenecks in document flow create “electronic documentation” with limited transformative impact [57, p. 8].

Furthermore, the alignment between digital support mechanisms and the enterprise's cash flow cycles needs to be optimized, as Ovinnikov argues that fully digitalized systems cannot cope with liquidity constraints [51, p. 75].

Finally, when these three conditions are largely met, digitalization produces significant benefits, as confirmed by quantitative studies [13, p. 157; 20, p. 54]. When one or more of these conditions are missing, digitalization creates a certain isolation and can reproduce inequalities in access to public support through digital administrative platforms. Understanding these factors is important for explaining why digitalization leads to different outcomes across regions, types of firms, and policy areas.

6. Conclusion

Digital governance in the Russian agro-industrial complex is shaping innovative potential at the enterprise level, and the industry's competitiveness is the focus of this study, specifically how structural conditions regulate these relationships. Based on a survey of 30 experts and the testing of three theoretically based hypotheses, the study draws a number of important conclusions.

Summary of results

Hypothesis H1 received full support: experts believe that digitalization of governance is strongly associated with positive innovation-driven outcomes: over 93 % of respondents gave high and tangible ratings for improved use of digital technologies, and 96.6 % for increased competitiveness. Hypothesis H2 received partial support: technology-focused programs outperform most financial support programs, but the exceptional effectiveness of concessional lending (highly rated at 69.0 %) suggests a synergy between access to capital and technical capabilities, rather than a simple substitute for policy-driven outcomes. Hypothesis H3 received full support: experts agree that systemically interconnected

constraints — bureaucracy with paperwork (89.7 % of barrier descriptions), regional disparities, selective competition, and the capital mobilization time paradox — clearly represent a “transformational digital divide” [42, p. 66], weakening the positive effects of digitalization.

Theoretical contribution

This study contributes to public administration theory and practice in three ways. First, it provides empirical evidence that the digitalization of administrative management functions as an institutional mechanism that stimulates enterprise innovation, making the application of institutional theory to platform governance more realistic [47; 50]. Second, it demonstrates that the transition process in Russia is still ongoing, as platforms have not completely eliminated bureaucratic barriers, calling into question the assumption that digitalization automatically simplifies administrative management [41; 19]. Third, it proposes a framework of three institutional quality requirements (equal access, process integrity, and temporal consistency) that determine whether digitalization will bring inclusive or selective benefits to both small and large firms.

Policy implications

When implementing public policy reforms, Russian policymakers should consider several key points. First, increased attention must be paid to simplifying documentation requirements, processes, and waiting periods before switching to a new platform to avoid “electronic document flow”. Second, the development of regional digital capacity should accompany the creation of a national platform to address persistent geographic inequalities. Third, policy development should incorporate access to credit, technical support, and regulatory compliance within unified interfaces designed to meet the needs of both small and large businesses. Fourth, the capital raising time paradox requires a well-planned reform aimed at addressing liquidity issues that cannot be resolved through digitalization alone.

Limitations of the study and directions for further research

Several limitations should be clearly stated. The sample size ($N = 30$), although sufficient for expert studies, limits the statistical generalizability of the results. The cross-sectional study captures perceptions at a single point rather than tracking changes over time. Focusing on expert assessments, while valuable for gaining practical insights, may inadequately measure firm performance. Therefore, future research should conduct longitudinal panel studies tracking the relationship between digitalization intensity and innovation outcomes across different groups of firms using larger samples. A particularly promising area of research, opened by the full-scale implementation of the Unified Digital Platform for Agro-Industrial and Fisheries Complexes (EDP APK / ECP APK) on 1 March 2026, is a long-term “before and after” assessment of how the unification of EFGIS ZSN, FGIS “Grain”, FGIS “Saturn”, FGIS “Seed Production”, AIS “APK Subsidies”, GIS “IAS NTOR-SKh”, and GIS “Single Window” into a single access point will impact transaction costs, regional inequality, and the “transformational digital divide” described here. An additional comparative study could compare state integration through EDP APK with commercially oriented ecosystems, such as Rosselkhozbank’s “Svoye” ecosystem, in terms of their impact on the innovation potential of small and medium-sized enterprises in the agro-industrial and fisheries complexes.

Final thoughts

The transition from paper documents to a digital platform is not just a sovereign technological innovation but also a powerful institutional transformation. The Russian experience demonstrates that digitalization can change incentives for innovation and competitiveness trajectories when implemented with equal access, process integrity,

and time consistency in mind. However, structural barriers, complex document management processes, regional inequalities limiting access, and time constraints on capital investment highlight the limitations of technological solutions for administrative and institutional reform. The challenge facing the Russian agro-industrial complex, and indeed all agricultural systems undergoing digital transformation, is not simply digitizing paper processes but also eliminating the bureaucratic obstacles inherent in these processes.

References

1. Acemoglu D., Robinson J. A. *Why Nations Fail: The Origins of Power, Prosperity, and Poverty*. New York: Crown Publishers, 2012. 529 p.
2. Aker J. C., Mbiti I. M. Mobile Phones and Economic Development in Africa // *Journal of Economic Perspectives*. 2010. Vol. 24, No. 3. P. 207–232.
3. Astanakulov K., Tatarintsev V. L., Nuriddinov J., Mukumova F., Allaberdieva K., Suyunova Z. Technological modernization of the Russian agro-industrial complex // *BIO Web of Conferences*. 2025. Vol. 161. Art. 00049. DOI: 10.1051/bioconf/202516100049
4. Astratova G. V., Izmailov A. M., Onwusiribe C. N. Innovative activities of small and medium-sized enterprises in the context of digital transformation of the economies of Russia and Belarus // *Drucker Bulletin [Drukerovsky vestnik]*. 2024. No. 5. P. 217–240. (In Russ.). DOI: 10.17213/2312-6469-2024-5-217-240
5. Barney J. Firm Resources and Sustained Competitive Advantage // *Journal of Management*. 1991. Vol. 17, No. 1. P. 99–120.
6. Baturina I., Bukhtiyarova T., Artamonova I. Digital transformation of the agro-industrial complex in Russia: necessity and features // *Proceedings of the IX International Scientific and Practical Conference “Actual Problems of Social and Labour Relations”*. Atlantis Press, 2022. P. 27–32. (In Russ.). DOI: 10.2991/assehr.k.220208.006.
7. Bogner A., Menz W. *The Theory-Generating Expert Interview: Epistemological Interest, Forms of Knowledge, Interaction // Interviewing Experts* / ed. by A. Bogner, B. Littig, W. Menz. Basingstoke: Palgrave Macmillan, 2009. P. 43–80.
8. Braun V., Clarke V. *Using Thematic Analysis in Psychology // Qualitative Research in Psychology*. 2006. Vol. 3, No. 2. P. 77–101.
9. Bryman A. *Social Research Methods*. 5th ed. Oxford: Oxford University Press, 2016. 747 p.
10. Bunkovsky V. I. Analysis of innovative development of the agro-industrial complex // *BIO Web of Conferences*. 2023. Vol. 71. Art. 01037. (In Russ.). DOI: 10.1051/bioconf/20237101037
11. Butusova Yu. K. Imperfect competition in the agro-industrial complex and antimonopoly policy towards agro-industrial associations in modern Russia // *Economics and Management: Problems, Solutions [Ekonomika i upravlenie: problemy, resheniya]*. 2025. No. 1. P. 73–82. (In Russ.). DOI: 10.36871/ek.up.p.r.2025.01.05.010
12. Chernaya A., Kabanenko M., Ugrimov S. Improving the management of the agro-industrial complex at the federal level // *IOP Conference Series: Earth and Environmental Science*. 2019. Vol. 274. Art. 012073. (In Russ.). DOI: 10.1088/1755-1315/274/1/012073
13. Chuvakhin P. I. Digital transformation of the agro-industrial complex: economic efficiency of introducing information technologies // *Agrarian Science [Agrarnaya nauka]*. 2025. Vol. 397, No. 8. P. 155–159. (In Russ.). DOI: 10.32634/0869-8155-2025-397-08-155-159
14. Creswell J. W., Plano Clark V. L. *Designing and Conducting Mixed Methods Research*. 3rd ed. Thousand Oaks: SAGE Publications, 2018. 520 p.
15. Denisova N. V., Proskura D. V. Digital transformation of the Russian agricultural complex as a tool for innovative development // *Eurasian Scientific Journal [Evraziyskoe nauchnoe obozrenie]*. 2023. Vol. 15, No. 6. Art. 22FAVN623. (In Russ.).
16. Dolganov A. I. *History of the development of agriculture in Russia*. Moscow: KolosS, 2008. 412 p. (In Russ.).
17. Dunleavy P., Margetts H., Bastow S., Tinkler J. *New Public Management Is Dead — Long Live Digital-Era Governance // Journal of Public Administration Research and Theory*. 2006. Vol. 16, No. 3. P. 467–494.
18. Fedotova G., Stepanishin V., Kapustina Yu., Bolaev B., Averina A., Churaev A. Digital ecosystem of the Russian Agricultural Bank as an innovative platform for sustainable development of the agro-industrial complex // *E3S Web of Conferences*. 2024. Vol. 486. Art. 01006. (In Russ.). DOI: 10.1051/e3sconf/202448601006

19. Fountain J. E. *Building the Virtual State: Information Technology and Institutional Change*. Washington, D.C.: Brookings Institution Press, 2001. 251 p.
20. Germanchuk A. N., Kravchenko E. S., Komarnitskaya E. V., Karashchuk O. S., Degtyareva Yu. V. Digital transformation of the agro-industrial complex of the regional economy: the efficiency of agricultural processing in the context of sustainable development // *Economics of Agricultural and Processing Enterprises [Ekonomika selskokhozyaystvennykh i pererabatyvayushchikh predpriyatiy]*. 2025. No. 7. P. 49–55. (In Russ.). DOI: 10.31442/0235-2494-2025-0-7-49-55
21. Grishin A. M. The impact of import substitution policy on the Russian agro-industrial complex // *Bulletin of the University [Vestnik universiteta]*. 2025. No. 9. P. 81–90. (In Russ.). DOI: 10.26425/1816-4277-2025-9-81-90
22. Guest G., Bunce A., Johnson L. How Many Interviews Are Enough? An Experiment with Data Saturation and Variability // *Field Methods*. 2006. Vol. 18, No. 1. P. 59–82.
23. Gusev M. A., Sergeev K. A., Bayramov M. G., Petunina I. A. Digitalization of the Russian agro-industrial complex: prospects and economic efficiency // *Economics and Management: Problems, Solutions [Ekonomika i upravlenie: problemy, resheniya]*. 2025. No. 6. P. 201–208. (In Russ.). DOI: 10.36871/ek.up.p.r.2025.06.02.022
24. Gusmanov R., Stovba E., Shvetsov M., Isaev N. Digital transformation of the Russian agro-industrial complex in the context of global challenges // *Russian Journal of Management [Rossiyskiy zhurnal menedzhmenta]*. 2025. Vol. 13, No. 10. P. 253–265. (In Russ.). DOI: 10.29039/2500-1469-2025-13-10-253-265
25. Heeks R. E-Government in Africa: Promise and Practice // *Information Polity*. 2002. Vol. 7, No. 2–3. P. 97–114.
26. Ibragimov A. G. Digital transformation in Russian agriculture // *Economic Consultant [Ekonomicheskii konsultant]*. 2024. Vol. 2, No. 2. P. 10–19. (In Russ.). DOI: 10.46224/ecoc.2024.2.2
27. Janssen M., Estevez E. Lean Government and Platform-Based Governance — Doing More with Less // *Government Information Quarterly*. 2013. Vol. 30, Suppl. 1. P. S1–S8.
28. Kalashnikov K., Zhadan M., Baryshnikova N., Saninsky S. Digital transformation of the Russian agro-industrial sector: challenges and opportunities // *Advances in Social Science, Education and Humanities Research*. 2020. Vol. 392. P. 243–249. (In Russ.). DOI: 10.2991/assehr.k.200113.040
29. Kashkin S. Yu., Altukhov A. V. Artificial intelligence and platform law for the development of the digital agro-industrial complex of the Russian Federation // *Actual Problems of Russian Law [Aktualnye problemy rossiyskogo prava]*. 2021. No. 7. P. 122–129. (In Russ.). DOI: 10.17803/1729-5920.2021.176.7.122-129
30. Klychova G., Fassakhov B. I. Digitalization of accounting in the agro-industrial complex of Russia: current state and development prospects // *Agrarian Science [Agrarnaya nauka]*. 2025. No. 3. P. 48–53. (In Russ.).
31. Komlatsky G. V., Pogrebnaya N. V., Bobrysheva V., Golovanev A. V. Strategic approaches to the digital transformation of the Russian agro-industrial complex to stimulate innovative development // *Bulletin of the Altai Academy of Economics and Law [Vestnik Altayskoy akademii ekonomiki i prava]*. 2024. No. 6. P. 435–440. (In Russ.). DOI: 10.17513/vaael.3939
32. Kopteva L. A., Romanova I. V. Threats to the food security of the Russian Federation // *Economics and Management: Problems, Solutions [Ekonomika i upravlenie: problemy, resheniya]*. 2025. No. 3. P. 8–15. (In Russ.). DOI: 10.36871/ek.up.p.r.2025.03.11.008
33. Kornilova L. M., Ivanov P. Digital transformation and readiness for it of the agro-industrial complex of the Chuvash Republic // *Agrarian Science [Agrarnaya nauka]*. 2023. No. 11. P. 160–164. (In Russ.). DOI: 10.32634/0869-8155-2022-364-11-160-164
34. Korytin A. V., Sokolov I. A. Regulation of competition in the agro-industrial complex using tax policy mechanisms // *Journal of Modern Competition [Sovremennaya konkurentsiya]*. 2025. Vol. 19, No. 3. P. 73–90. (In Russ.). DOI: 10.37791/2687-0657-2025-19-3-73-90
35. Landis J. R., Koch G. G. The Measurement of Observer Agreement for Categorical Data // *Biometrics*. 1977. Vol. 33, No. 1. P. 159–174.
36. Likert R. A Technique for the Measurement of Attitudes // *Archives of Psychology*. 1932. Vol. 140. P. 1–55.
37. Lundvall B.-Å. *National Systems of Innovation: Towards a Theory of Innovation and Interactive Learning*. London: Pinter Publishers, 1992. 342 p.
38. Malerba F. Sectoral Systems of Innovation and Production // *Research Policy*. 2002. Vol. 31, No. 2. P. 247–264.

39. Marinchenko T. E. Digitalization of the agricultural sector: prospects in Russia // *European Proceedings of Social and Behavioural Sciences*. 2020. Vol. 90. P. 1141–1149. (In Russ.). DOI: 10.15405/epsbs.2020.10.03.131
40. Medennikov V., Muratova L., Salmikov S. The unified digital platform “Agro-industrial Complex of Russia” as a mechanism for overcoming digital feudalism // *Proceedings of the International Scientific and Practical Conference “Ensuring Stability and Security of Socio-Economic Systems”*. SciTePress, 2021. P. 210–218. (In Russ.). DOI: 10.5220/0010702100003169.
41. Mergel I., Edelmann N., Haug N. Defining Digital Transformation: Results from Expert Interviews // *Government Information Quarterly*. 2019. Vol. 36, No. 4. Art. 101385. DOI: 10.1016/j.giq.2019.06.002
42. Mitrofanova I., Inshakova E., Dovbiy I. Digitalization of the Russian agro-industrial complex: current trends and development problems // *Bulletin of Volgograd State University. Economics [Vestnik Volgogradskogo gosudarstvennogo universiteta. Ekonomika]*. 2023. Vol. 25, No. 2. P. 63–75. (In Russ.). DOI: 10.15688/ek.jvolsu.2023.2.5
43. Monakhov S. V. Structural changes in the system of ensuring technological independence of the Russian agro-industrial complex: digitalization of agriculture // *Agricultural Economy of Russia [Ekonomika selskogo khozyaystva Rossii]*. 2025. No. 4. P. 64–70. (In Russ.). DOI: 10.32651/254-64
44. Moroz O., Medvedsky D. Digital potential of the Russian agro-industrial complex based on the results of technological innovations // *BIO Web of Conferences*. 2024. Vol. 108. Art. 02008. (In Russ.). DOI: 10.1051/bioconf/202410822008
45. Moroz O., Medvedsky D. High-tech agricultural implements as a factor in the dynamic rationalization of business processes in Russian agriculture // *BIO Web of Conferences*. 2025. Vol. 179. Art. 16002. (In Russ.). DOI: 10.1051/bioconf/202517916002
46. Ndulu B., O’Connell S., Bates R., Collier P., Soludo C. *The Political Economy of Economic Growth in Africa, 1960–2000*. Cambridge: Cambridge University Press, 2008. 484 p.
47. North D. C. *Institutions, Institutional Change and Economic Performance*. Cambridge: Cambridge University Press, 1990. 152 p.
48. Orlova N. V., Nikolaev D. Prospects for Russian agricultural innovations in the context of global challenges: Agriculture 4.0 // *Russian Journal of Economics*. 2022. Vol. 8, No. 2. P. 203–220. (In Russ.). DOI: 10.32609/j.ruje.8.78430
49. Osadchaya N., Murzin A., Revunov R., Plokhotnikova G. Organizational and economic priorities for the development of the agro-industrial complex in Russia at the regional level // *IOP Conference Series: Earth and Environmental Science*. 2021. Vol. 937, No. 3. Art. 032061. (In Russ.). DOI: 10.1088/1755-1315/937/3/032061
50. Ostrom E. *Governing the Commons: The Evolution of Institutions for Collective Action*. Cambridge: Cambridge University Press, 1990. 280 p.
51. Ovinnikov V. A. State financing of innovation activities in the agricultural sector: trends and problems // *Theoretical and Applied Problems of the Agro-Industrial Complex [Teoreticheskie i prikladnye problemy APK]*. 2025. Vol. 65, No. 3. P. 69–76. (In Russ.). DOI: 10.32935/2221-7312-2025-65-3-69-76
52. Pallant J. *SPSS Survival Manual: A Step-by-Step Guide to Data Analysis Using IBM SPSS*. 7th ed. London: Routledge, 2020. 378 p.
53. Pilova F. Current state of technological and digital support for enterprises of the agro-industrial complex // *Bulletin of the Kabardino-Balkarian State Agrarian University named after V. M. Kokov [Izvestiya Kabardino-Balkarskogo GAU im. V. M. Kokova]*. 2025. Vol. 1, No. 47. P. 135–141. (In Russ.). DOI: 10.55196/2411-3492-2025-1-47-135-141
54. Pivovarova O., Orlov S. L., Khachatryan A. Digital ecosystem of the agricultural sector of the Russian Federation: possibilities and limitations of implementation // *Agrarian Science [Agrarnaya nauka]*. 2025. Vol. 390, No. 1. P. 140–153. (In Russ.). DOI: 10.32634/0869-8155-2025-390-01-140-153
55. Razuvaev R., Tsatsulin A. What are the immediate prospects for the implementation of innovative activities in the domestic agro-industrial complex? // *Administrative Consulting [Upravlencheskoe konsultirovanie]*. 2022. No. 3. P. 95–107. (In Russ.). DOI: 10.22394/1726-1139-2022-3-95-107
56. Rodygina D. P. Application of modern digital technologies in the agro-industrial complex // *E3S Web of Conferences*. 2023. Vol. 462. Art. 01040. (In Russ.). DOI: 10.1051/e3sconf/202346201040
57. Shogentsukova Z. Kh., Shogentsukov A. Kh. Digital aspects of managing the agro-industrial complex of Russia // *E3S Web of Conferences*. 2020. Vol. 222. Art. 01012. (In Russ.). DOI: 10.1051/e3sconf/202022201012

58. Shokumova R. Modern trends in digitalization of the Russian agro-industrial complex // Bulletin of the Kabardino-Balkarian State Agrarian University named after V. M. Kokov [Izvestiya Kabardino-Balkarskogo GAU im. V. M. Kokova]. 2025. Vol. 1, No. 47. P. 142–150. (In Russ.). DOI: 10.55196/2411-3492-2025-1-47-142-150
59. Shulgina L., Chernyshova I., Shulgin A. Innovative system of the agro-industrial complex: sectoral and territorial aspects // IOP Conference Series: Earth and Environmental Science. 2019. Vol. 274. Art. 012097. (In Russ.). DOI: 10.1088/1755-1315/274/1/012097
60. Skomoroshchenko A., Lazko L. Development of the agro-industrial complex of Russia: export potential, investments, and sustainable growth scenarios // Moscow Economic Journal [Moskovskiy ekonomicheskij zhurnal]. 2025. Vol. 10, No. 10. P. 278–290. (In Russ.). DOI: 10.55186/2413046x_2025_10_10_237
61. Tekueva M. Optimization of state control imposed on the innovation sphere in the agro-industrial complex // European Proceedings of Social and Behavioural Sciences. 2019. Vol. 76. P. 483–492. (In Russ.). DOI: 10.15405/epsbs.2019.12.04.483.
62. Ustyukova V. Use of innovations in agriculture as a factor in ensuring food security (legal aspect) // NB: Administrative Law and Administrative Practice [Administrativnoe pravo i praktika administrirovaniya]. 2025. No. 3. P. 10–20. (In Russ.). DOI: 10.7256/2306-9945.2025.3.76049
63. Van Dijck J., Poell T., De Waal M. The Platform Society: Public Values in a Connective World. New York: Oxford University Press, 2018. 226 p.
64. Veselovsky M., Pilipenko P., Savenko V. G., Glebova A. G., Shmeleva L. Organization of innovation transfer in the Russian agro-industrial complex // European Research Studies Journal. 2017. Vol. 20, No. 4. P. 154–167. (In Russ.). DOI: 10.35808/ersj/723
65. Vorobyeva N., Kovaleva A., Vorobyov O. Digitalization of agriculture in Russia: a regional perspective // IOP Conference Series: Earth and Environmental Science. 2021. Vol. 723, No. 3. Art. 032082. (In Russ.). DOI: 10.1088/1755-1315/723/3/032082
66. Yakushev V. M. Agrarian reform in Russia: stages and results // Voprosy Ekonomiki. 2008. No. 5. P. 15–28. (In Russ.).
67. Yakushev V. M. Privatization in agriculture: lessons of the 1990s // Agricultural Economy of Russia [Ekonomika selskogo khozyaystva Rossii]. 2008. No. 8. P. 20–32. (In Russ.).
68. Yin R. K. Case Study Research and Applications: Design and Methods. 6th ed. Thousand Oaks: SAGE Publications, 2018. 352 p.
69. Yudin A., Tarabukina T. Problems and prospects of digitalization of the Russian agricultural sector under international sanctions // Moscow Economic Journal [Moskovskiy ekonomicheskij zhurnal]. 2024. Vol. 9, No. 4. P. 1–15. (In Russ.). DOI: 10.55186/2413046x_2024_9_4_227

Conflict of interests

The authors declares no relevant conflict of interests.

About the authors:

Onwusiribe Chigozirim Ndubuisi, PhD in agribusiness and financial management, Postdoctoral, Ural Federal University named after the first President of Russia B. N. Yeltsin, Yekaterinburg, Russian Federation; onwusiribe@urfu.ru; ORCID: <https://orcid.org/0000-0002-7740-5458>

Galina V. Astratova, Professor of the Department of Regional Economics, Innovative Entrepreneurship and Economics, Ural Federal University named after the first President of Russia B. N. Yeltsin, Yekaterinburg, Russian Federation; galina_28@mail.ru; ORCID: <https://orcid.org/0000-0002-3579-4440>

Литература

1. Acemoglu D., Robinson J. A. Why Nations Fail: The Origins of Power, Prosperity, and Poverty. New York: Crown Publishers, 2012. 529 p.
2. Aker J. C., Mbiti I. M. Mobile Phones and Economic Development in Africa // Journal of Economic Perspectives. 2010. Vol. 24, No. 3. P. 207–232.
3. Astanakulov K., Tatarintsev V.L., Nuriddinov J., Mukumova F., Allaberdieva K., Suyunova Z. Technological modernization of the Russian agro-industrial complex // BIO Web of Conferences. 2025. Vol. 161. Art. 00049. DOI: 10.1051/bioconf/202516100049
4. Астратова Г. В., Измаилов А. М., Онвусирибе Ч. Н. Инновационная деятельность малых и средних предприятий в условиях цифровой трансформации экономики России и Беларуси // Друкеровский вестник. 2024. № 5. С. 217–240. DOI: 10.17213/2312-6469-2024-5-217-240

5. Barney J. Firm Resources and Sustained Competitive Advantage // *Journal of Management*. 1991. Vol. 17, No. 1. P. 99–120.
6. Батурина И., Бухтиярова Т., Артамонова И. Цифровая трансформация агропромышленного комплекса России: необходимость и особенности // Сборник трудов IX Международной научно-практической конференции «Актуальные проблемы социально-трудовых отношений». Atlantis Press, 2022. С. 27–32. DOI: 10.2991/assehr.k.220208.006
7. Bogner A., Menz W. The Theory-Generating Expert Interview: Epistemological Interest, Forms of Knowledge, Interaction // *Interviewing Experts* / ed. by A. Bogner, B. Littig, W. Menz. Basingstoke: Palgrave Macmillan, 2009. P. 43–80.
8. Braun V., Clarke V. Using Thematic Analysis in Psychology // *Qualitative Research in Psychology*. 2006. Vol. 3, No. 2. P. 77–101.
9. Bryman A. *Social Research Methods*. 5th ed. Oxford: Oxford University Press, 2016. 747 p.
10. Буньковский В. И. Анализ инновационного развития агропромышленного комплекса // *BIO Web of Conferences*. 2023. Vol. 71. Art. 01037. DOI: 10.1051/bioconf/20237101037
11. Бутусова Ю. К. Несовершенная конкуренция в АПК и антимонопольная политика в отношении агропромышленных объединений в современной России // *Экономика и управление: проблемы, решения*. 2025. № 1. С. 73–82. DOI: 10.36871/ek.up.p.r.2025.01.05.010
12. Чёрная А., Кабаненко М., Уgrimов С. Совершенствование управления агропромышленным комплексом на федеральном уровне // *IOP Conference Series: Earth and Environmental Science*. 2019. Vol. 274. Art. 012073. DOI: 10.1088/1755-1315/274/1/012073
13. Чувахин П. И. Цифровая трансформация АПК: экономическая эффективность внедрения информационных технологий // *Аграрная наука*. 2025. Т. 397, № 8. С. 155–159. DOI: 10.32634/0869-8155-2025-397-08-155-159
14. Creswell J. W., Plano Clark V. L. *Designing and Conducting Mixed Methods Research*. 3rd ed. Thousand Oaks: SAGE Publications, 2018. 520 p.
15. Денисова Н. В., Проскура Д. В. Цифровая трансформация аграрного комплекса России как инструмент инновационного развития // *Евразийское научное обозрение*. 2023. Т. 15, № 6. Ст. 22FAVN623.
16. Долганов А. И. *История развития сельского хозяйства России*. М. : КолосС, 2008. 412 с.
17. Dunleavy P., Margetts H., Bastow S., Tinkler J. *New Public Management Is Dead — Long Live Digital-Era Governance* // *Journal of Public Administration Research and Theory*. 2006. Vol. 16, No. 3. P. 467–494.
18. Федотова Г., Степанишин В., Капустина Ю., Болаев Б., Аверина А., Чураев А. Цифровая экосистема Россельхозбанка как инновационная платформа устойчивого развития АПК // *E3S Web of Conferences*. 2024. Vol. 486. Art. 01006. DOI: 10.1051/e3sconf/202448601006
19. Fountain J. E. *Building the Virtual State: Information Technology and Institutional Change*. Washington, D.C.: Brookings Institution Press, 2001. 251 p.
20. Германчук А. Н., Кравченко Е. С., Комарницкая Е. В., Каращук О. С., Дегтярёва Ю. В. Цифровая трансформация АПК региональной экономики: эффективность сельскохозяйственной переработки в контексте устойчивого развития // *Экономика сельскохозяйственных и перерабатывающих предприятий*. 2025. № 7. С. 49–55. DOI: 10.31442/0235-2494-2025-0-7-49-55
21. Гришин А. М. Влияние политики импортозамещения на агропромышленный комплекс России // *Вестник университета*. 2025. № 9. С. 81–90. DOI: 10.26425/1816-4277-2025-9-81-90
22. Guest G., Bunce A., Johnson L. How Many Interviews Are Enough? An Experiment with Data Saturation and Variability // *Field Methods*. 2006. Vol. 18, No. 1. P. 59–82.
23. Гусев М. А., Сергеев К. А., Байрамов М. Г., Петунина И. А. Цифровизация АПК России: перспективы и экономическая эффективность // *Экономика и управление: проблемы, решения*. 2025. № 6. С. 201–208. DOI: 10.36871/ek.up.p.r.2025.06.02.022
24. Гусманов Р., Стомба Е., Швецов М., Исаев Н. Цифровая трансформация АПК России в условиях глобальных вызовов // *Российский журнал менеджмента*. 2025. Т. 13, № 10. С. 253–265. DOI: 10.29039/2500-1469-2025-13-10-253-265
25. Heeks R. *E-Government in Africa: Promise and Practice* // *Information Polity*. 2002. Vol. 7, No. 2–3. P. 97–114.
26. Ибрагимов А. Г. Цифровая трансформация в российском сельском хозяйстве // *Экономический консультант*. 2024. Т. 2, № 2. С. 10–19. DOI: 10.46224/есос.2024.2.2
27. Janssen M., Estevez E. *Lean Government and Platform-Based Governance — Doing More with Less* // *Government Information Quarterly*. 2013. Vol. 30, Suppl. 1. P. S1–S8.

28. Калашников К., Жадан М., Барышникова Н., Санинский С. Цифровая трансформация агропромышленного сектора России: вызовы и возможности // *Advances in Social Science, Education and Humanities Research*. 2020. Vol. 392. P. 243–249. DOI: 10.2991/assehr.k.200113.040
29. Кашкин С. Ю., Алтухов А. В. Искусственный интеллект и платформенное право для развития цифрового АПК Российской Федерации // *Актуальные проблемы российского права*. 2021. № 7. С. 122–129. DOI: 10.17803/1729-5920.2021.176.7.122-129
30. Клычова Г., Фассахов Б. И. Цифровизация бухгалтерского учёта в АПК России: современное состояние и перспективы развития // *Аграрная наука*. 2025. № 3. С. 48–53.
31. Комлацкий Г.В., Погребная Н.В., Бобрышева В., Голованёв А. В. Стратегические подходы к цифровой трансформации АПК России для стимулирования инновационного развития // *Вестник Алтайской академии экономики и права*. 2024. № 6. С. 435–440. DOI: 10.17513/vaee.3939
32. Коптева Л. А., Романова И. В. Угрозы продовольственной безопасности Российской Федерации // *Экономика и управление: проблемы, решения*. 2025. № 3. С. 8–15. DOI: 10.36871/ek.up.p.r.2025.03.11.008
33. Корнилова Л. М., Иванов П. Цифровая трансформация и готовность к ней АПК Чувашской Республики // *Аграрная наука*. 2023. № 11. С. 160–164. DOI: 10.32634/0869-8155-2022-364-11-160-164
34. Корытин А. В., Соколов И. А. Регулирование конкуренции в АПК с использованием механизмов налоговой политики // *Современная конкуренция*. 2025. Т. 19, № 3. С. 73–90. DOI: 10.37791/2687-0657-2025-19-3-73-90
35. Landis J. R., Koch G. G. The Measurement of Observer Agreement for Categorical Data // *Biometrics*. 1977. Vol. 33, No. 1. P. 159–174.
36. Likert R. A Technique for the Measurement of Attitudes // *Archives of Psychology*. 1932. Vol. 140. P. 1–55.
37. Lundvall B.-Å. *National Systems of Innovation: Towards a Theory of Innovation and Interactive Learning*. London: Pinter Publishers, 1992. 342 p.
38. Malerba F. Sectoral Systems of Innovation and Production // *Research Policy*. 2002. Vol. 31, No. 2. P. 247–264.
39. Маринченко Т. Е. Цифровизация аграрного сектора: перспективы в России // *European Proceedings of Social and Behavioural Sciences*. 2020. Vol. 90. P. 1141–1149. DOI: 10.15405/epsbs.2020.10.03.131
40. Меденников В., Муратова Л., Сальников С. Единая цифровая платформа «Агропромышленный комплекс России» как механизм преодоления цифрового феодализма // *Материалы Международной научно-практической конференции «Обеспечение устойчивости и безопасности социально-экономических систем»*. SciTePress, 2021. С. 210–218. DOI: 10.5220/0010702100003169
41. Mergel I., Edelman N., Haug N. Defining Digital Transformation: Results from Expert Interviews // *Government Information Quarterly*. 2019. Vol. 36, No. 4. Art. 101385. DOI: 10.1016/j.giq.2019.06.002
42. Митрофанова И., Иншакова Е., Довбий И. Цифровизация АПК России: современные тенденции и проблемы развития // *Вестник Волгоградского государственного университета. Экономика*. 2023. Т. 25, № 2. С. 63–75. DOI: 10.15688/ek.vjolsu.2023.2.5
43. Монахов С. В. Структурные изменения в системе обеспечения технологической независимости АПК России: цифровизация сельского хозяйства // *Экономика сельского хозяйства России*. 2025. № 4. С. 64–70. DOI: 10.32651/254-64
44. Мороз О., Медведский Д. Цифровой потенциал АПК России по результатам технологических инноваций // *BIO Web of Conferences*. 2024. Vol. 108. Art. 02008. DOI: 10.1051/bioconf/202410822008
45. Мороз О., Медведский Д. Высокотехнологичные сельскохозяйственные орудия как фактор динамической рационализации бизнес-процессов в сельском хозяйстве России // *BIO Web of Conferences*. 2025. Vol. 179. Art. 16002. DOI: 10.1051/bioconf/202517916002
46. Ndulu B., O'Connell S., Bates R., Collier P., Soludo C. *The Political Economy of Economic Growth in Africa, 1960–2000*. Cambridge: Cambridge University Press, 2008. 484 p.
47. North D. C. *Institutions, Institutional Change and Economic Performance*. Cambridge: Cambridge University Press, 1990. 152 p.
48. Орлова Н. В., Николаев Д. Перспективы российских аграрных инноваций в условиях глобальных вызовов: Сельское хозяйство 4.0 // *Russian Journal of Economics*. 2022. Т. 8, № 2. С. 203–220. DOI: 10.32609/j.ruje.8.78430

49. Осадчая Н., Мурзин А., Ревунов Р., Плехотникова Г. Организационно-экономические приоритеты развития АПК России на региональном уровне // IOP Conference Series: Earth and Environmental Science. 2021. Vol. 937, № 3. Art. 032061. DOI: 10.1088/1755-1315/937/3/032061
50. Ostrom E. *Governing the Commons: The Evolution of Institutions for Collective Action*. Cambridge: Cambridge University Press, 1990. 280 p.
51. Овинников В. А. Государственное финансирование инновационной деятельности в аграрном секторе: тенденции и проблемы // Теоретические и прикладные проблемы АПК. 2025. Т. 65, № 3. С. 69–76. DOI: 10.32935/2221-7312-2025-65-3-69-76
52. Pallant J. *SPSS Survival Manual: A Step-by-Step Guide to Data Analysis Using IBM SPSS*. 7th ed. London: Routledge, 2020. 378 p.
53. Пилова Ф. Современное состояние технологической и цифровой поддержки предприятий АПК // Известия Кабардино-Балкарского ГАУ им. В.М. Кокова. 2025. Т. 1, № 47. С. 135–141. DOI: 10.55196/2411-3492-2025-1-47-135-141
54. Пивоварова О., Орлов С. Л., Хачатрян А. Цифровая экосистема аграрного сектора Российской Федерации: возможности и ограничения внедрения // Аграрная наука. 2025. Т. 390, № 1. С. 140–153. DOI: 10.32634/0869-8155-2025-390-01-140-153
55. Разуваев Р., Цацулин А. Каковы ближайшие перспективы реализации инновационной деятельности в отечественном АПК? // Управленческое консультирование. 2022. № 3. С. 95–107. DOI: 10.22394/1726-1139-2022-3-95-107
56. Родыгина Д. П. Применение современных цифровых технологий в АПК // E3S Web of Conferences. 2023. Vol. 462. Art. 01040. DOI: 10.1051/e3sconf/202346201040
57. Шогенцукова З. Х., Шогенцуков А. Х. Цифровые аспекты управления АПК России // E3S Web of Conferences. 2020. Vol. 222. Art. 01012. DOI: 10.1051/e3sconf/202022201012
58. Шокумова Р. Современные тенденции цифровизации АПК России // Известия Кабардино-Балкарского ГАУ им. В.М. Кокова. 2025. Т. 1, № 47. С. 142–150. DOI: 10.55196/2411-3492-2025-1-47-142-150
59. Шульгина Л., Чернышова И., Шульгин А. Инновационная система АПК: отраслевые и территориальные аспекты // IOP Conference Series: Earth and Environmental Science. 2019. Vol. 274. Art. 012097. DOI: 10.1088/1755-1315/274/1/012097
60. Скоморощенко А., Лазко Л. Развитие АПК России: экспортный потенциал, инвестиции и сценарии устойчивого роста // Московский экономический журнал. 2025. Т. 10, № 10. С. 278–290. DOI: 10.55186/2413046x_2025_10_10_237
61. Текуева М. Оптимизация государственного контроля, налагаемого на инновационную сферу АПК // European Proceedings of Social and Behavioural Sciences. 2019. Vol. 76. P. 483–492. DOI: 10.15405/epsbs.2019.12.04.483
62. Устюкова В. Использование инноваций в сельском хозяйстве как фактор обеспечения продовольственной безопасности (правовой аспект) // NB: Административное право и практика администрирования. 2025. № 3. С. 10–20. DOI: 10.7256/2306-9945.2025.3.76049
63. Van Dijck J., Poell T., De Waal M. *The Platform Society: Public Values in a Connective World*. New York: Oxford University Press, 2018. 226 p.
64. Веселовский М., Пилипенко П., Савенко В. Г., Глебова А. Г., Шмелёва Л. Организация инновационного трансфера в АПК России // European Research Studies Journal. 2017. Т. 20, № 4. С. 154–167. DOI: 10.35808/ersj/723
65. Воробьёва Н., Ковалёва А., Воробьёв О. Цифровизация сельского хозяйства в России: региональный аспект // IOP Conference Series: Earth and Environmental Science. 2021. Vol. 723, № 3. Art. 032082. DOI: 10.1088/1755-1315/723/3/032082
66. Якушев В. М. Аграрная реформа в России: этапы и результаты // Вопросы экономики. 2008. № 5. С. 15–28.
67. Якушев В. М. Приватизация в сельском хозяйстве: уроки 1990-х годов // Экономика сельского хозяйства России. 2008. № 8. С. 20–32.
68. Yin R. K. *Case Study Research and Applications: Design and Methods*. 6th ed. Thousand Oaks: SAGE Publications, 2018. 352 p.
69. Юдин А., Тарабукина Т. Проблемы и перспективы цифровизации аграрного сектора России в условиях международных санкций // Московский экономический журнал. 2024. Т. 9, № 4. С. 1–15. DOI: 10.55186/2413046x_2024_9_4_227

Конфликт интересов

Авторы заявляют об отсутствии конфликта интересов.

Об авторах:

Онвусирибе Чигозирим Ндубуиси, кандидат наук в области агробизнеса и финансового менеджмента, постдокторант, Уральский федеральный университет имени первого Президента России Б. Н. Ельцина, Екатеринбург, Российская Федерация; onvusiribe@urfu.ru; ORCID: <https://orcid.org/0000-0002-7740-5458>

Астратова Галина Владимировна, профессор кафедры региональной экономики, инновационного предпринимательства и экономики, Уральский федеральный университет имени первого Президента России Б. Н. Ельцина, Екатеринбург, Российская Федерация; galina_28@mail.ru; ORCID: <https://orcid.org/0000-0002-3579-4440>

Поступила в редакцию: 26.03.2026

Поступила после рецензирования: 20.04.2026

Принята к публикации: 18.05.2026

The article was submitted: 26.03.2026

Approved after reviewing: 20.04.2026

Accepted for publication: 18.05.2026

© Онвусирибе Ч. Н., Астратова Г. В., 2026