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SOCIOLOGICAL RESEARCH INTO THE DIGITIZATION OF PUBLIC ADMINISTRATION

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Abstract. *Different aspects of using sociological instruments have gained crucial importance concerning: the social dynamics of the assessment of public administration; the analysis of the internal efficiency of processes; and the efficiency of regional government bodies' activities and their political and economic decisions. The results of research carried out in the Komi Republic are presented in order to outline the best mechanisms for implementing e-government. This study reveals the attitude of the state administration to public service reforms, the technological priorities of public administration, and indicators of the optimization of public and municipal services on the basis of the enhanced use of information technology.*

Keywords: *public administration, digitalization, administrative reform.*

Reikšminiai žodžiai: *viešasis administravimas, skaitmeninimas, administracinė reforma.*

The relevance of the study

The use of sociological methods to measure social opinion has become an important part of the impact of these instruments on the development of social technologies in public administration. They enable the study of political and administrative reforms not only in terms of their relationships with the population, but also with state officials. Recently, the amount of research on the social effectiveness of public administration has been increasing, and this growing amount of research has borrowed an interdisciplinary approach for the analysis of public and municipal government systems.

Some authors analyze the set of strategic instruments of public administration and the dependence of the efficiency of public administration on the organizational design of state apparatus structures (Peci and Fornazin 2016, 99–100; Korosec 2006, 221).

This research methodology often sets out the problem of public administration, the task of quantitatively analyzing government bodies' activities, and their qualitative expression for reforms (Mele and Belardinelli 2019, 334). V. Mele and P. Belardinelli (2019, 343) emphasized the need for integrated management reporting and the increased transparency of state administration in their research.

Describing the tasks of increasing confidence in public administration, Vincent Mabillard and Martial Pasquier (2016) highlighted the lack of connection between the transparency of the government and the increased level of citizens' trust in it. While a part of the scientific literature often examines the positive relationship between these two concepts (Heeks and Bailur 2007, 256), the need for active action on the part of the institutions of power towards digitalizing management processes is emphasized. In many studies, researchers emphasize that the search for effective public administration methods and instruments is often viewed through the prism of NPM (new public management) governmental reforms (Bolshakova 2018, 86).

V. Nakrošis, a well-known Lithuanian expert in the field of public administration, emphasized the importance of ethical approaches in the context of the modernization of management, observing that the measurement of processes often focuses on the operational measurement of public officers' efficiency – a combination of the behavioral and management approaches of public officers (Nakrošis 2015, 640). The results of monitoring the activities of the authorities are mostly of an imitative and demonstrative character, sometimes even being a form of simulacrum of the institutions of power, without having any influence on the real political decisions of the authorities or on the real assessment of the efficiency of regional and local government (Belyaeva 2009, 33). Such important indicators of the regional socio-economic sector as life expectancy at birth, population size, unemployment rate, real disposable income of the population, share of the total area of residential buildings, etc., do not show the whole picture of the state of regional management.

To date, concepts have been formed in the apparatus of public administration, according to which “management is an autonomous and self-sufficient phenomenon, reproducing its internal tasks, needs and processes” (Belyaeva 2009, 36).

As observed by F. Pega, N. Valentine, and D. Matenson (2010, 450), from the point of view of the effectiveness of social management, it is justified to rely on the definition

of the efficiency and effectiveness criterion as the decisive one in determining the rules of the functioning of the management system.

Research Methodology

Methods of sociological analysis, statistics, and general scientific methods of synthesis allow the scientific systemization of the issues considered in the context of the social processes being studied.

The results of the sociological survey of public officers in the Komi Republic (Russia) reveal a set of problems in implementing the practices of new state management and assessing the effectiveness of state programs aimed at social and economic development.

Sociological research has demonstrated the need for in-depth development at each stage of public administration and public service reform. Public officers reveal a certain fatigue brought about by the activity of introducing business management practices into the activities of the state apparatus. Most public officials express a high level of willingness to organize work within a client-oriented model of public administration.

Analysis of the dynamics of the renewal of the corps of state apparatus employees revealed that the majority of public officials (80.8%) believe that after the elections for the next governor of the region, 10% of public sector employees will be dismissed and then replaced by supporters of the new head of the administration.

It is worth noting that in many cases it is the heads of the public service (56.2% of the “leaders” category) who insist on the dismissal of a large part of the state apparatus after the change of the head of the region; while 30.2% of the respondents suggested dismissing one quarter of public officials; and 26% of the surveyed category suggested dismissing half of public officials. More than 60% of respondents emphasized the high level of digital technology implementation, and more than the half of respondents (55%) admitted that the digitalization of government leads to threats to their information security and the mass formation of open databases for relevant consumer groups (businesses, civic organizations, etc.). This study emphasizes the importance of ensuring the information security of public administration institutions. The priority for the authorities is digital security in the process of introducing technology into management processes.

Sociological measurement methods refer to the instruments necessary in the development of the social technologies of public administration. Sociological methods are used in determining the assessment of the internal social dynamics of the public administration apparatus, the analysis of the efficiency and effectiveness of the internal processes of regional government bodies, and the political and economic decisions taken.

The focus of all transformations, reforms and public administration and public service system restructurings has always been on the desire to improve the efficiency of executive bodies and to raise the level of professional culture and professionalism of government officials, whose work largely depends on wellbeing and moderation in the country (Bell 2014, 109).

The idea and practice of new public management includes other important concepts: a consumer – a person or society as a whole, who is provided with high quality services;

and efficiency and effectiveness – the set of performance and cost-effectiveness indicators for government agencies' activity, i.e., spending less and saving resources.

Reforming public service based on new public management is aimed at the improvement of the efficiency of the public sector and its economic impact. Customer (consumer) orientation and proximity to the citizen also provide an opportunity to improve the process of providing services to the public administration, and determine which public services can and should essentially be provided (Bolshakova 2014, 89).

The traditional approach to legislative activity, which involves a strict linear sequence of certain steps and agreements, is neither fast enough nor iterative enough for modern decision-making – the main challenges of the new digital age. Direct citizen engagement enabled by technology requires rethinking and developing fundamentally different processes aimed at simplifying interactions, from obtaining public and municipal services to holding elections.

Results

A sociological survey of civil servants was carried out in the Komi Republic (Russia) using the generally accepted quantitative parameter of the sample set, calculated with the help of the Student criterion. The sample size this research work was 412 people – a sufficient basis for the empirical confirmation of the hypothesis.

The target audience was comprised of public officers in the regional office of the government of the Komi Republic. The main part of the questions focused on the study of positions on the digitization of the public administration of the middle layer of bureaucracy – i.e., line managers who, according to the federal law of 27 July 2004 No. 79-FZ, fall into the civil service categories of chief professionals, leading professionals and department heads.

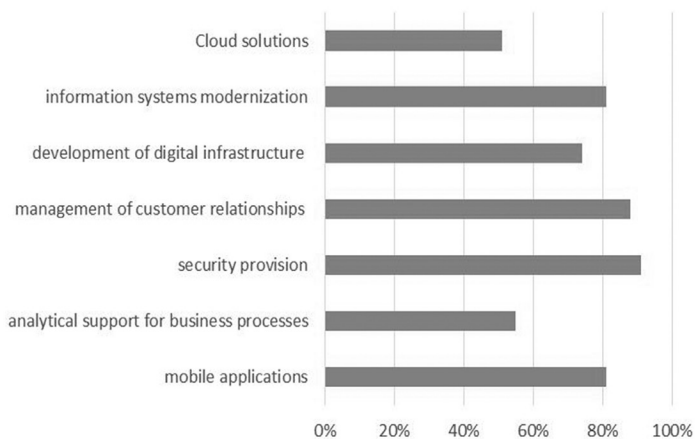


Figure 1. Answers to the question “What are the technological priorities of government agencies?” (Komi Republic, 2016, N = 412)

Source: Compiled by the authors

The results of the study reveal that when assessing the technological priorities chosen by the state bodies, the respondents considered the following factors to be the most important: 55% selected the transition of the processes of the state apparatus and the corresponding analytical support for business processes to platform solutions; 91% selected the security provision as among the most important indicators for civil servants; 88% selected the transition to life management and the management of relationships with customers and consumers of state services; 74% selected the need to support the development of digital infrastructure in the state apparatus; the constant support and the need to modernize information systems was selected by 81% of respondents, which includes ensuring the operation of the gocuslugi.ru state portal; and the format of mobile applications was also supported by 81% of the respondents.

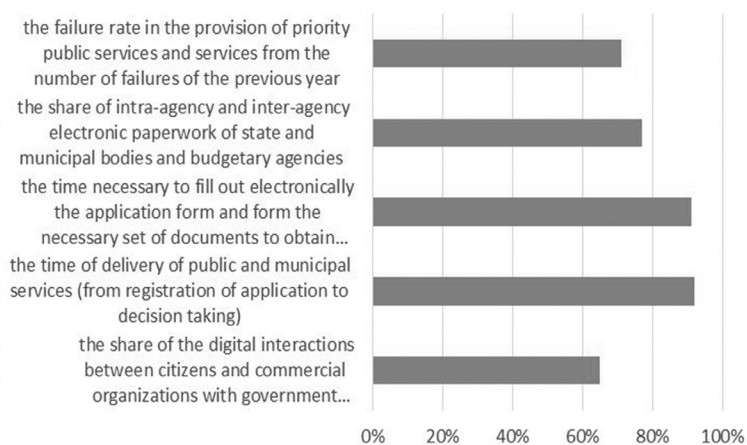


Figure 2. Answers to the question “What are the most important indicators of the optimization of public and municipal services based on the increased use of information technology?” (Komi Republic, 2016, N = 412)

Source: Compiled by the authors

The transition to the task of digitizing public administration is important for most public servants. The results of the sociological study allow for the conclusion that the leading indicators in assessing the degree of optimization of public and municipal services based on the expanded use of information technology are: the time of delivery of public and municipal services from application to decision (92% of respondents); the importance of electronically filling out the application form and forming the necessary set of documents to obtain public and municipal services (91%); the share of intra- and inter-agency electronic paperwork for state and municipal bodies and budgetary agencies (77%); the failure rate in the provision of priority public services and other services relative to the number of failures in the previous year (71%); and the share of digital in-

teractions between citizens and commercial organizations with government (municipal) bodies and budget agencies (65%).

New digital technologies have great potential to transform traditional public administration processes. The importance of transplanting digital research into the functioning of public administration is linked to cybersecurity problems and the confidentiality of national information platforms.

New areas in the field of cloud technologies, cybersecurity and information analytics are leading the way in the system of modern government, as shown above by the importance of the information security provision indicator in the assessment of public officials, with 91% of respondents observing that it is a priority.

According to an expert assessment by the High School of Economics Research Institute (*Digital transformation... 2019*, 43), the set order of activities aimed at the coordination of informatization has a number of significant shortcomings. First, the criteria set by the Russian government for evaluating informatization plans are extremely vague, which does not imply the qualitative examination of planned and conducted information activities by the Russian Ministry of Communications. Secondly, the approved provisions do not provide any serious consequences for federal executive authorities if the set requirements are not met. Thus, the information coordination mechanism has not become a tool for forming a unified IT decision architecture at the federal level. The federal government authorities continue to be autonomous consumers of IT solutions in automating their own activities, and the coordination of information plans and reports on their performance with the Russian Ministry of Communications is merely formal.

Government costs were mainly borne within the framework of specialized state programs, especially the Information Society program, the global goal of which is to bring Russia into the top 10 countries in terms of the development of information technologies. This comprehensive program identifies three key directions for the digital economy:

- infrastructure development and narrowing the digital gap between the regions;
- the development of e-government;
- the development of ICT-based services.

The digitalization of public administration is a leading priority in the business processes of the state apparatus, which consistently includes security and management (Gaspareniene et al. 2016, 503). The digitalization of management processes is based on expanding data and using analytical capabilities by way of creating digital culture, enhancing the accessibility of databases, and providing local interfaces for internal and external usage environments.

Discussion

Modern public sector organizations highly appreciate a degree of network defense, or information protection. The state has to invest heavily in the development and improvement of information security measures: it must purchase expensive encryption equipment, specific software, and special licenses (Zhudrov 2018, 67).

The concept of safety is important because of the human factor, as social engineering

works the same way in many spheres. The difference here lies in the activity of the society itself. In different countries, various measures of information security are initiated by various social groups, from parents to professional associations. In Russia, security measures run down from above and are rejected by society on the spot, regardless of whether they are necessary or not. Wider research shows that there are almost no hacking sites abroad, yet there are a large number of them in the Russian language. As a result, approaches to network security are changing.

Such programs have long been working beyond a signal-based approach – that is, they do not only identify viruses by their characteristic features, but also analyze anomalies in traffic and the behavior of objects, taking into account the fact that malicious traffic is able to conceal itself in the form of other popular and permitted protocols and programs. In addition, attackers do not disregard legal software – for example, that of system administrators. The human factor works in favor of intruders. For the authorities, the most important threats and vulnerabilities of zero-day are encryption viruses or targeted attacks, which are also a form of illicit goods, such as drugs or weapons.

In future, the cyber arms race will escalate. The competitiveness of global institutions of power will depend on the formation of a cybersecurity ecosystem. This will allow: closing all available channels, not only single points of entry; taking into account a wide range of attack targets; introducing machine learning algorithms; and identifying incidents, even in the context of incomplete data. The future lies with intelligent services that are able to find solutions without involving people.

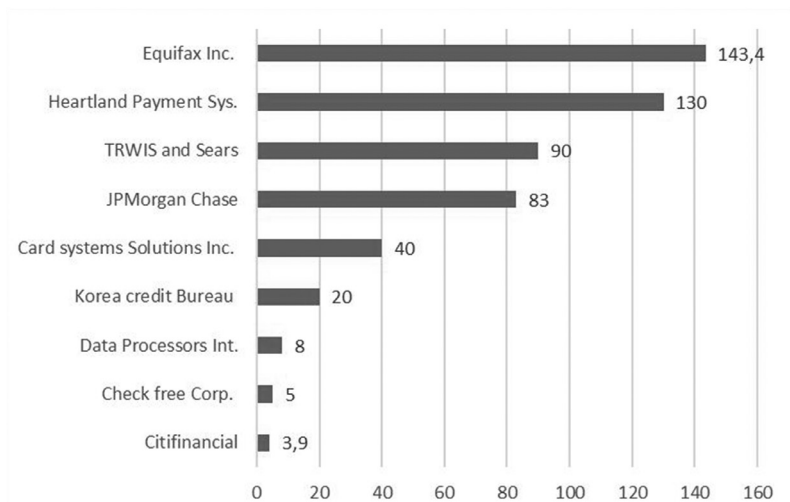


Figure 3. *The largest profile data thefts, millions of customers, 2019*

According to Deloitte research (Briggs and O'Dwyer 2016), the cost of cybersecurity for companies is typically included in the overall budget of the IT department, and on

average makes up around 12% of its total outlay. According to IDG, around 75% of companies have combined IT and cybersecurity departments, and only 25% of companies include a separate cybersecurity department as an independent structure.

All of the above highlights the importance of security issues for public administration.

According to the latest research and BCG rating (Bank and Butenko 2016), Russia is among the top 10 countries in terms of the percentage of its population that actively uses public services online. Monthly, 10 million people visit the gosuslugi.ru portal, and this number is continually growing. At the same time, the penetration rate of public services among the adult population is almost 70%. The majority of consumers, 84%, use the gosuslugi.ru public portal to pay fines. According to statistics, this is the most popular online public service, but there are other services that are also commonly used for booking medical appointments, enrolling in schools or kindergartens, and issuing passports.

The use of web services carries risks, the most common of which is the loss of the electronic digital signature key. The situation is changing as new services are added to the portal and it becomes more popular, yet plunderers continue to use people's electronic signatures to register false businesses for tax avoidance, which the government then attempts to extract from the complainant. Experts consider this problem very serious, as an electronic digital signature (EDS) can be obtained in any certifying center, and information about issued and revoked certificates is available only from these centers. At the moment, it is impossible to check in a particular location whether an EDS certificate has been issued and, if so, where and when. Issuing a new certificate does not automatically cancel the validity of a previous one.

Conclusion

1. Increased investment in the electronic public environment and information technology is becoming a particularly important factor for the active transition to digital public and municipal services. It should be borne in mind that administrative reform is accompanied by changes in the approach to management technologies and the provision of resources to government bodies.
2. The analysis of internal factors of the functioning of the state apparatus and indicators influencing the behavior and decision-making of public officials has revealed a set of conditions affecting the digitalization of public services (Mercer 2003, 9).
3. This research shows that there is a need for more precise differentiation of: the status of career officials and political officials; the expansion and change of the practice of contracts with public officials; the introduction of KPIs; and the establishment of work efficiency indicators.
4. The digitalization of the state apparatus should take place at all levels – first and foremost in provisional activity. Successful implementation is only possible if all levels and directions are fully covered by digital transformation. The main condition for successful digitization is to redesign all processes based on the complete exclusion of traditional paper processes and any face-to-face interactions. Digital reengineering and au-

tomation of all processes without exception, including routine procedures, is necessary in government bodies. Digital transformation means the transfer to data, services and infrastructure of common use.

5. The main factors making information expenditures inefficient include the absence of a methodology for determining the cost of operating and developing information systems set as a norm by regulations, as well as the lack of direct legislative definitions of government information systems and their creation.
6. Thus, it is important to note that the need to implement a platform business model and its successful operation is due to a set of economic characteristics.
 - a. First, the purpose of any digital platform is to ensure that users of different types interact.
 - b. Second, the platform company usually does not own the product it sells on the market, and does not provide the services it offers on the market. This creates an open, interactive infrastructure for all market participants, with well-defined rules.
 - c. Third, successful platforms are characterized by a large number of participants both on the part of suppliers and consumers, so the costs of both sides for selection and interaction with each other are quite high.
 - d. Fourth, the level of quality and the speed of interaction increases with platform services, while expenditures for the interaction of platform users decrease, as compared to traditional forms of interaction. This is particularly important for improving the efficiency of public and municipal governance.
 - e. Finally, modern platforms are constantly accumulating large amounts of data on participants' behavior, which is then used to optimize the operation of platforms.

References

1. Bank, B., and Butenko, V. 2016. *Russia Online: catch up or fall behind?* Boston Consulting Group (BCG).
2. Bell N., 2014. "Leading to Make a Difference: A Field Experiment on the Performance Effects of Transformational Leadership, Perceived Social Impact, and Public Service Motivation." *Journal of Public Administration Research and Theory* 24 (1): 109–136.
3. Belyaeva, L. 2009. "Uroven i kachestvo zhizni. Problemy izmereniya i interpretatsii [Level and quality of life. Problems of measurement and interpretation]." *Sotsiologicheskie issledovaniya*, No. 1: 33–42.
4. Bolshakova, Y. 2018. "Assessment of the Effectiveness of Social Management in the Region." *The Journal of Social Sciences Research*, Special Issue 3: 85–90.
5. Briggs, B., and O'Dwyer, J. 2016. "Social impact of exponential technologies: Corporate social responsibility 2.0." *Deloitte Insights*, February 24, 2016. <https://www2.deloitte.com/xe/en/insights/focus/tech-trends/2016/social-impact-of-exponential-technologies.html>
6. "Digital transformation of public administration: myths and reality." 2019. In *Reports at the 20th April International Scientific Conference on Economic and Social Development, Moscow, 9–12 April 2019*, edited by N. Ye. Dmitrieva, 43. Moscow: Publishing House of the Higher School of Economics.
7. Gasparieni L., Remeikiene R., and Navickas V. 2016. "The Concept of Digital Shadow Economy: Consumer's Attitude." *Procedia Economics and Finance* 39: 502–509.
8. Heeks, R., and Bailur, S. 2007. "Analyzing e-government research: Perspectives, philosophies, theories, methods, and practice." *Government Information Quarterly* 24 (2): 243–265.
9. Korosec, R. 2006. "Is Department-Based Strategic Planning more Effective than Organization-Wide

- Strategic Planning? Empirical Evidence from Senior Managers.” *Public Performance & Management Review*, No. 2: 221–244.
10. Mabilard, V., and Pasquier, M. 2016. “Transparency and Trust in Government (2007–2014): A Comparative Study.” *NISPAcee Journal of Public Administration and Policy* 9 (2): 69–92. <https://doi.org/10.1515/nispa-2016-0015>.
 11. Mele, V., and Belardinelli, P. 2019. “Mixed Methods in Public Administration Research: Selecting, Sequencing, and Connecting.” *Journal of Public Administration Research and Theory* 29 (2): 334–347.
 12. Mercer, C. 2003. “From Indicators to Governance to the Mainstream: Tools for Cultural Policy and Citizenship.” In *Accounting for Culture: Examining the Building Blocks of Cultural Citizenship*, edited by Caroline Andrew, Monica Gattinger, M. Sharon Jeannotte and Will Straw, 9–20. Nottingham: Nottingham Trent University.
 13. Nakrošis, V. 2015. “Viešojo sektoriaus reformos ir jų sėkmė: kaip paaiškinti reformos iniciatyvų įgyvendinimą Europoje ir Lietuvoje?” *Public Policy and Administration* 14 (4): 639–645. <https://doi.org/10.13165/VPA-15-14-4-12>.
 14. Peci, A., and Fornazin, M. 2016. “The knowledge-building process of public administration research: a comparative perspective between Brazil and North American contexts.” *International Review of Administrative Sciences*, No. 83, Supplement 1: 99–119.
 15. Pega, F., Valentine, N., and Matheson, D. 2010. “Monitoring Social Well-Being: The Case of New Zealand’s Social Reports.” Social Determinants of Health Discussion Paper No. 3. Geneva: World Health Organization.
 16. Zhudro, M. M. 2018. “Theory and toolkit for identification of high-tech hybrid organizations in the digital economy (Economy 4.0).” *Herald of Komi Republican Academy of Public Service and Management. Series: Theory and management practice* 25 (20): 66–70.

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SOCIOLOGINIAI VIEŠOJO ADMINISTRAVIMO SKAITMENINIMO TYRIMAI

Anotacija. *Vertinant viešojo administravimo socialinę dinamiką, analizuojant vidaus efektyvumo procesus ir regionų valdžios institucijų veiklos efektyvumą, priimamus politinius ir ekonominius sprendimus, itin reikšmingas tapo sociologinių instrumentų panaudojimo pritaikomumas. Tyrimo, atlikto Komijos respublikoje, rezultatai skirti geriausių elektroninės valdžios įgyvendinimo mechanizmų paieškoms. Tyrimas atskleidžia valstybės valdymo požiūrį į viešųjų paslaugų reformas, viešojo administravimo technologinius prioritetus, viešųjų ir savivaldybių paslaugų optimizavimo rodiklius remiantis sustiprintu informacinių technologijų panaudojimu.*

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