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E-SERVICES IN MUNICIPAL OFFICES DURING THE COVID-19 PANDEMIC

E-USŁUGI W URZĘDACH GMIN W CZASIE PANDEMII COVID-19

ABSTRACT

The Covid-19 pandemic and the social and economic crisis it caused, made it necessary for local government units to quickly adapt to functioning in a new reality. Local governments were forced to take steps to reorganize their operations, as well as additional measures to minimize the negative effects of the pandemic. It became necessary to provide services using electronic tools and remote communication. Not all local government units were prepared for such changes. The purpose of the research was to assess the preparedness of municipal offices to operate and provide e-services during the Covid-19 pandemic and to indicate the barriers which impaired these operations. The spatial scope of the research covered the Świętokrzyskie Voivodeship, Poland. The research was conducted in 2022. The paper uses the results of own research conducted with the help of a survey questionnaire addressed to secretaries of communes. The study found that significant factors preventing the remote work were the low level of digitization of offices, lack of sufficient hardware and software for remote work, and

insufficient staff competence. Lack of sufficient equipment also made it impossible to provide remote learning to all students in schools supervised by the local government.

KEYWORDS: *pandemic, local government, remote working, remote learning, digitization of offices*

STRESZCZENIE

Pandemia Covid-19 i wywołany nią kryzys społeczno – gospodarczy spowodowała konieczność szybkiego dostosowania się jednostek samorządu terytorialnego do funkcjonowania w nowej rzeczywistości. Samorządy zmuszone zostały do podjęcia działań polegających na reorganizacji ich funkcjonowania, a także dodatkowych działań mających na celu minimalizację negatywnych skutków pandemii. Konieczne okazało się świadczenie usług z wykorzystaniem narzędzi elektronicznych oraz komunikacji na odległość. Nie wszystkie jednostki samorządu terytorialnego były przygotowane do takich zmian. Celem badań była ocena dostosowania urzędów gmin województwa świętokrzyskiego do działania i świadczenia e-usług w warunkach pandemii Covid-19 oraz wskazanie barier uniemożliwiających to działanie. Zakres przestrzenny badań obejmował województwo świętokrzyskie. Badania przeprowadzono w 2022 roku. W opracowaniu wykorzystano wyniki badań własnych przeprowadzonych przy pomocy kwestionariusza ankiety skierowanego do sekretarzy gmin. Z badań wynika, że istotnymi czynnikami, które uniemożliwiały świadczenie pracy zdalnej był niski poziom digitalizacji urzędów, brak wystarczającego sprzętu i oprogramowania do pracy zdalnej, brak dostatecznych kompetencji pracowników. Brak wystarczającej ilości sprzętu uniemożliwił także objęcie zdalnym nauczaniem wszystkich uczniów w szkołach nadzorowanych przez samorząd.

SŁOWA KLUCZOWE: *pandemia, samorząd, praca zdalna, zdalne kształcenie, digitalizacja urzędów*

INTRODUCTION

The epidemic of Covid-19 posed a number of challenges to local government units and made it necessary to quickly adjust their functioning to the new reality. With the entry into force of the provisions of the Regulation of the Minister of Health of 13 March 2020 (Regulation ... Journal of Laws of 2020, item 433) on declaring the state of epidemic hazard in the territory of

the Republic of Poland, the activities of public administration offices have been limited. Local governments have been forced to take steps to reorganize their operations and have begun to work in a hybrid system. A rotational system of work was introduced, dividing employees into shifts, and where possible, remote work was organized, i.e. work performed outside the office. Problems occurred, related to the need to equip offices with equipment for remote working (e.g. portable computers), purchase appropriate software, but also the need to train employees and managers in remote working. It is important to consider how local governments have adapted to operating in the conditions of a pandemic. It is particularly relevant in the case of basic local government units that are closest to the citizen and provide the most services to their residents. The purpose of the paper is to assess the adaptation of commune offices of the Świętokrzyskie Voivodeship to operate under conditions of the Covid-19 pandemic, and to indicate barriers that impaired such operations. The study allowed to indicate crucial barriers and problems that the local government units had to grapple with during the pandemic which is especially relevant since there are few studies in this area at the local level. The source of data is the results of a survey, conducted in 2022, using a questionnaire aimed at commune secretaries. The research involved 43 communes, which constitute 42% of all basic local government units in the Świętokrzyskie Voivodeship.

THE COVID-19 PANDEMIC AND ITS IMPACT

The term ‘pandemic’, according to Encyklopedia PWN, means an epidemic of particularly large proportions, the scope of which covers countries or even continents (<https://encyklopedia.pwn.pl/>). COVID-19 appeared in China, in local hospitals in Wuhan in late 2019, then spread across the country. In the second half of February, outbreaks of infection appeared in South Korea, Italy, and Iran. On March 11, 2020, the World Health Organization declared the COVID-19 pandemic, and two days later reported that Europe had become its epicenter. The emergence of coronavirus triggered far-reaching, often unpredictable consequences (Szczepański, 2020, pp. 10-11). In the past, smallpox, plague, cholera, among others, spread in the form of pandemics. Currently,

there are HIV infections causing AIDS in humans, as well as influenza and COVID-19. The largest of these epidemics occurring in the 14th century caused the deaths of over 25% of the population of Europe at the time. The incidence of the epidemic in Europe became progressively less frequent and ceased in the mid-18th century, occurring since then mainly in India, China and parts of Africa. The introduction of antibiotics and protective vaccinations has resulted in a decrease in the number of infections. Between 1918 and 1919, there was an influenza pandemic, referred to as the Spanish flu, which resulted in the deaths of 20 to 40 million people. Next influenza pandemics occurred in the following years: 1957 (Asian flu), 1968 (Hong Kong flu), and 1977 (Russian flu), and major epidemics in the years: 1948-49, 1952-53, 1965, 1973, 1985, 1995. In each of the large pandemics occurring in the second half of the 20th century in the United States alone more than 50,000 people died, and in smaller ones about 10,000 people die every year. All influenza pandemics, as well as major epidemics originate in Southeast Asia, and the sources of new virus types are usually birds (including domestic birds) and pigs (Borowska, 2021).

The effects of the pandemic are also being felt in Poland, with the country experiencing its first recession since adopting a free market economy in 1989. A freeze or reduction in business activity for companies in certain industries has affected the health of companies and reduced revenues. Numerous industries have found themselves on the verge of profitability. Serious problems have been experienced by, among others, catering, hotel, aviation, event, entertainment (e.g., movie theaters), and fitness industries (Stravinsky, 2020, pp. 10-11).

The threats posed by the spread of COVID-19 have not gone unnoticed in virtually every sphere of life. New challenges were faced by both employees and employers, who were forced to take measures to minimize the transmission of the virus. One such measure was a change in the way employees provided work, which included, in particular, working remotely, working shorter hours, or working only on certain days.

REMOTE WORKING IN LOCAL GOVERNMENT UNITS DURING THE COVID-19 PANDEMIC

Prior to the COVID-19 pandemic, work was typically done on-site and working from home was not quite common. It was most often performed by employees whose tasks did not require collaboration with others or supervision (e.g., IT professionals, consultants, creative professions). The pandemic forced the employees to automate very quickly, it introduced distance learning, remote working and online meetings. It also caused a very rapid digitization process. According to a World Bank (report prepared in cooperation with PARP), as a result of the pandemic, 32 percent of Polish companies have started to use (or have increased the use of) the Internet, social media, specialized applications or digital platforms for business purposes (COVID-19 Business Pulse Survey – Poland, 2020). From the perspective of current law, the concept of remote working is defined in the so-called Covid Law, dated March 2, 2020, “On special solutions related to the prevention, counteracting and combating of COVID-19, other infectious diseases and crisis situations caused by them” (Journal of Laws 2020.374). Article 3(1) provides that, in order to counteract COVID-19, an employer may instruct an employee to perform, for a limited period of time, work specified in the employment contract, outside the place of its regular performance (remote work). Regulations on remote work before the pandemic were limited to telecommuting only (Labor Code, Journal of Laws of 2022, item 655, Articles 675-6715). Telecommuting involves an employee regularly (e.g., for a set three days per week) performing work outside the workplace using electronic communication. However, this form of work was not common due to its insufficient flexibility and additional obligations imposed on employers. More common in practice was home office, which is the incidental provision of work from outside the workplace, such as for a few selected days per month or on an ad hoc basis. Before the outbreak, only a few percent of employees in Poland worked in the home office formula. It was mainly used by small businesses, primarily due to the need to reduce costs. In 2020, the share of this form of work organization has already covered several percent of the workforce (Hausner, 2020, p. 6). The epidemic

directly contributed to the fact that remote work popularized very rapidly and immediately on a large scale (Hausner, 2020, p. 6).

Remote work and its impact on the economy and the work process had already been the focus of researchers prior to the COVID-19 pandemic. Many benefits of remote work for an employee were perceived, including, but not limited to: increased productivity, the ability to hire people with disabilities and those on parental leave, reduced commuting costs, more efficient time management, increased employment opportunities for people from small towns, and adapting work to one's biological lifestyle (Wyrwich, 2014, p. 14). According to a report by the World Economic Forum (WEF, 2020, p. 5), 84% of employers plan to rapidly digitize the work process, an important component of which is the popularization of remote work. Employers estimate that 44% of the employed people will permanently transition to remote work mode (WEF – World Economic Forum). The Future of Jobs Report. October, (2020).

Due to the pandemic, digitization has accelerated also in public administration. About 42% of Poles started using e-services during the pandemic (<https://www.gov.pl/web/cyfryzacja/cyfryzacja-podczas-pandemii>). In 2019, about 4.5 million Poles already had a digital identity (Trusted Profile). The Gov. pl portal includes services of all ministries and five central offices, as well as thematic services and tabs of over 140 e-services that can be processed online.

Since the outbreak of the pandemic, remote working has been one of the most important challenges facing public administration. The epidemic and lockdown revealed how low the level of digitization is in public and local government institutions. A report by the Supreme Audit Office (NIK) conducted in 2021 in 40 public units, the purpose of which was to determine the extent to which selected public units were prepared to organize employees to work remotely and the impact of such organization on the ability to perform key tasks, shows that the COVID-19 epidemic revealed that the way remote work was organized in the audited units varied widely (Organizacja pracy zdalnej...2021). NIK negatively assessed the preparedness of 34 out of 40 audited units performing public tasks to introduce remote working. All of the units surveyed had developed and implemented appropriate internal procedures and generally properly recorded remote work time, but infrastructural, financial, and technical barriers limited or prevented the proper organization

of effective remote work. In 29 units (73%) the number of owned computer equipment allowed to equip no more than every fourth employee, the main reason for which was the lack of funds for this purpose in the financial plans of the units. Inadequate preparedness also determined the use of employees' private resources for business purposes. The lack of digitized data had an impact on taking original documents outside the unit's headquarters. In addition, all the units audited experienced organizational barriers, particularly related to direct service to the clients.

The prerequisite for building such e-government is the necessity to develop new communication technologies, develop an economy based on information exchange, develop ICT networks and digitize the services offered by local governments. The process of public administration functioning in electronic form is called e-government. This term in Polish has many translations and is also interpreted differently, depending on the context in which it is used. In the literature there are terms: e-government, electronic administration, electronic office, e-gov, e-office, etc. (Wilk, 2014, p. 39). In 2003, the term was defined as "the use of information and communication technologies in public administration combined with organizational change and new skills to improve public services and democratic processes and strengthen support for public policies" (Communication from the Commission to the Council..., (2003), p. 7.). For Szyszka and Śliwczyński (2004, p. 86) this term means the digitalized information and communication relations, including external relations: office – citizen, office – entrepreneur, office – service provider and internal relations: office – office, office – employees. Modern e-government is supposed to be a flexible, open mechanism that ensures that employees at different levels work together to handle individual issues of clients (including citizens and entrepreneurs, individuals and legal entities) and to meet their collective needs (Fleszer 2014, pp. 125-136). Śliwiński (2008) lists the following characteristics that define electronic services (e-services): – they are provided in a partially or fully automated manner by information technology, – they are provided on and via the Internet, – they are personalized to the recipient, – the parties to the service provided are located in different places (remote service). Batko and Billewicz (2013) give examples of such services, among others: IT platforms epuap.pl, regional e-government platforms sekap.pl,

portals allowing to send documents e.g. tax returns e-deklaracje.gov.pl. The introduction of information and communication technologies for the functioning of public administration contributes to making it easier for citizens to contact the administration regardless of place and time. Public service delivery time is minimized by reducing the intermediate levels needed for issuing administrative decisions. Public administration clients have the ability to monitor the implementation of the service through special applications, such as tracking the status of the case. There is a reduction in the number of procedures performed by officials involved in handling traditional mail. An important rationale for the use of ICT is also to optimize human resources by reorganizing structures to fit the tasks and needs of citizens (Wilk, 2014, p. 38). In such a functioning administration the role of the citizen also changes. The citizen in his/her contacts with the administration appears no longer as a subject, but has the role of: recipient of provided goods, consumer of provided services, customer of arranged matters, partner of loyal cooperation, sponsor of means of subsistence, controller of quality of services, consultant of acquired knowledge. It is intended to be a customer – and service-oriented administration, available remotely at any time, offering holistic case management, limited to data collection and processing, and internally networked. (Janowski, 2009, p. 19). Through the use of ICT, administrative processes should be efficient for officials and transparent and clear for end users. The main objective of e-government is to enable citizens (and entrepreneurs) to access administrative services via the Internet 24 hours a day, 7 days a week and 365 days a year without leaving their homes (company seat) and waiting in queues.

An OECD report (*The e-Government Imperative*, OECD, 2003) identifies five main benefits of e-government. These include: increasing the efficiency of public administration activities, focusing on a customer by improving the quality of services provided, increasing the effectiveness of the state and support in the form of reforms, reducing public expenditure related to the functioning of public administration, building trust between citizens and the administration (government). The benefits of e-government for citizens and entrepreneurs are related to the convenience of implementation of public e-services. Other important factors are better customer service and access to more services. Saving time is also an important consideration. Benefits for

the administration are related to increased efficiency of offices due to, among other things, 24/7 service delivery capabilities, but also reduced operating costs and streamlined administrative processes (Wilk, 2014, p. 48). There is still much to be done in the area of public administration. Digital development efforts must focus on several areas. In addition to developing infrastructure and e-services, these include creating more friendly legislation and raising the digital competence of society.

PURPOSE AND METHOD OF RESEARCH

The purpose of the research was to assess the preparedness of municipal offices to operate and provide e-services during the Covid-19 pandemic and to indicate the barriers which impaired these operations. The spatial scope of the research covered the Świętokrzyskie Voivodeship. This area was chosen because of the poor recognition of the status of e-service development in the region, especially during the Covid-19 pandemic. All communes in the Świętokrzyskie Voivodeship were included in the research. The implementation method was a diagnostic survey in the form of an electronic questionnaire containing 30 questions addressed to the secretaries of communes in the Świętokrzyskie Voivodeship. The questionnaire was addressed to all communes in the Świętokrzyskie Voivodeship. 43 respondents (secretaries of the communes) completed the survey representing 42% of the surveyed units (including 60% of urban, 46% of urban-rural and 38% of rural communes in the Świętokrzyskie Voivodeship). The research was conducted in April and May 2022.

REMOTE WORK IN COMMUNES OF THE ŚWIĘTOKRZYSKIE VOIVODESHIP DURING THE COVID-19 PANDEMIC

The first issue researched was to identify opportunities and impediments to remote working of commune offices in the Świętokrzyskie Voivodeship. The research found that at the time of the pandemic outbreak, only 28% of the surveyed units had sufficient equipment to work remotely. In 44% of them, only a few employees could do remote work (these were mainly urban-rural and rural communes), and in 14% there was no such possibility at all, mainly in rural communes. The main reason for this was the need to be physically present in the workplace. This reason was specified by 60% of the units surveyed. It has been a barrier to doing remote work in all types of communes. A significant barrier preventing the provision of services remotely, indicated by rural communes, in addition to the lack of equipment, was the lack of appropriate qualifications of local government employees, as well as the unwillingness of supervisors to provide e-services. Table 1 shows the opportunities and impediments to remote working for the commune offices of the Świętokrzyskie Voivodeship in the surveyed units.

Table 1. Variation of opportunities and impediments to remote working of offices with diverse forms of local government units

No.	Item	Share of statements in the commune [%]			
		urban	urban-rural	rural	total
1.	Number of communes	60	46	38	42
2.	Possibility for employees to work remotely				
	majority	0	32	14	21
	half	34	21	19	21
	few	33	42	48	44
	no possibility	33	5	19	14
3.	Reason for not being able to do remote work				
	lack of hardware and software	0	26	52	28
	the need to be physically present in the workplace	67	79	86	60
	employee reluctance	0	11	5	5
	insufficient staff competence	0	5	24	8
	supervisors' reluctance to remote working	33	5	10	7

Source: Own research

Another issue examined was the assessment of the effectiveness of remote working in the commune offices of the Świętokrzyskie region. The majority of surveyed units provided online services during the pandemic (77%), with the fewest such services provided in rural communes. In 11 communes (26%) new e-services were introduced for residents and entrepreneurs, these were mainly rural and urban-rural communes.

Respondents were also asked to self-assess the effectiveness of remote work compared to on-site work. Considering the answers given, one should notice a rather skeptical attitude of the respondents towards the evaluation of remote work, 33% of the respondents assessed the effectiveness of remote work on a similar level as on-site, the same number of respondents thought that it was lower, and 30% still had no opinion on the subject. The factors that most affect the effectiveness of remote working, according to respondents, is the lack of access to documents collected in offices. This factor was emphasized in all types of communes. Another was the insufficient number of provided

e-services and lack of sufficient equipment, which was pointed out mainly in rural and urban-rural communes. In rural communes, inadequate staff skills were also a barrier causing lower efficiency. Table 2 shows the results of the research on the effectiveness of remote work of commune offices.

Table 2. Efficiency of remote work of commune offices

No.	Item	Share of statements in the commune [%]			
		urban	urban-rural	rural	total
1.	Share of offices providing e-services during the pandemic	100	79	71	77
2.	Offices introducing new e-services during the pandemic	0	32	24	26
3.	Self-assessment of the effectiveness of remote versus on-site work				
	definitely higher	0	0	0	0
	higher	0	0	0	0
	at a similar level	0	42	29	32
	lower	33	32	33	33
	definitely lower	0	5	5	5
	hard to say	67	21	33	30
4.	Factors most likely to reduce work efficiency				
	lack of sufficient equipment	33	21	33	17
	no access to documents	67	63	62	38
	the way work is organized	0	21	14	10
	insufficient staff skills	0	5	24	8
	insufficient number of provided e-services	33	32	43	23

Source: Own research

The pandemic and resulting lockdown has influenced a change in the approach to remote work by commune offices. First of all, the interest in e-services has increased across all types of communes. As a result, most units had taken or intended to take steps in the near future to increase the level of digitization of the office. Only in urban communes no such need was noted, which is probably related to the good state of equipment of urban offices in

this area. In rural and urban-rural communes, on the other hand, great needs within this scope are noted. In the near future, 42% of surveyed urban-rural communes and 38% of rural communes intend to take action in the area of office digitization.

Table 3. The impact of the pandemic on changes in approaches to remote working by commune offices

No.	Item	Share of statements in the commune [%]			
		urban	urban-rural	rural	total
1.	Assessing the impact of the pandemic on interest in e-services				
	definitely increased	0	16	19	17
	Increased	100	84	76	83
	Decreased	0	0	0	0
	definitely decreased	0	0	0	0
2.	Activities to increase the level of digitization of the office's services				
	Yes	33	47	48	47
	no, but is planned in the coming months	0	42	38	37
	there is no need	67	5	5	9
	No	0	5	10	7

Source: Own research

REMOTE LEARNING OPPORTUNITIES IN SCHOOLS GOVERNED BY COMMUNES

A significant problem that local governments faced when the pandemic broke out was the introduction of distance learning in their schools. The research analyzed the preparedness of schools to implement distance learning. The majority of surveyed units indicated that schools were prepared for distance learning (81%), but only 56% said they had enough equipment. Most of the units surveyed received additional funding to purchase distance learning equipment. The best situation in this respect was in urban communes, as all of them received additional funds for the purchase of equipment and covered

all students with distance learning. In rural and urban-rural communes, not all children were included in distance learning. Table 4 shows the situation in communes of the Świętokrzyskie Voivodeship in this respect.

Table 4. The role of commune offices in supporting distance learning and the situation of schools in this regard

No.	Item	Share of statements in the commune [%]			
		urban	urban-rural	rural	total
1.	Share of communes that incurred additional expenses for the purchase of equipment for distance learning in schools	0	63	57	56
2.	Share of communes that received additional funds to purchase distance learning equipment for schools	100	89	86	88
3.	Schools prepared for distance learning	100	74	86	81
4.	Schools with sufficient equipment for distance learning in schools	33	42	71	56
5.	Share of schools that included all students in distance learning	100	68	71	72

Source: Own research

CONCLUSIONS

The research conducted allowed several conclusions to be drawn. Although it concerns only one voivodeship, and therefore it cannot be generalized to the whole country, it gives some picture of the “Covid” situation in many Polish communes.

The Covid-19 pandemic has had a significant impact on the operation of local government units. There were quite significant barriers that prevented the provision of e-services and remote work. This was primarily an inadequate level of digitization of commune offices, which resulted in the need for physical access to documents and materials necessary to perform tasks. This barrier was indicated by all types of communes.

There were also shortages in the equipment and competences of employees, especially in urban-rural and rural communes. The lack of sufficient equipment made it impossible to cover all students by remote learning. The results

of the research indicate disparities in the equipment and appropriate competences of employees to provide e-services in different types of communes. The situation was definitely better in urban communes of the Świętokrzyskie region which allowed them to better adapt to operating in the conditions of a pandemic. The results of the research also indicate significant problems, and actions that the communes will have to take in the near future. They are primarily related to the digitization of offices, the provision of equipment and appropriate software, and the improvement of employees' competences. The study's results may be a guideline for the appropriate authorities to take action in the future.

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