

E-GOVERNMENT – SOCIALY EXPECTED OR OFFICIALLY IMPOSED?

Łukasz SKIBA

Politechnika Częstochowska, Wydział Zarządzania; lukasz.skiba@pcz.pl, ORCID: 0000-0002-5176-3265

Purpose: the need to determine whether e-government is socially desirable or perhaps imposed on citizens by the government.

Design/methodology/approach: Survey research method - quantitative research using a survey questionnaire carried out using CATI technique and the "Voice bot" assistive technique.

Findings: the development of e-government is socially expected as well as imposed by the administration.

Research limitations/implications: Generations BB and Z showed slightly more resistance to e-government than the rest of the generations. In-depth research should be carried out to demonstrate or falsify regularities.

Social implications: If in-depth research shows that the BB and Z generations show greater resistance to e-government than other generations, then remedial steps should be identified and taken (especially in the case of Z-s that enter mature life and will be contacted more and more often with the administration). Convincing generations to e-government will affect the quality of social life.

Originality/value: Linking openness or resistance to the use of e-government with belonging to a specific generation. The article is particularly useful for the administration when targeting its services to generational groups.

Keywords: E-government, administration, generational groups.

Category of the paper: Research paper.

1. Introduction

1.1. E-government - definition and levels

E-government is defined somewhat differently, e.g. in Anglo-Saxon countries, the EU, OECD, and UN. For the purposes of this study, the term in question was taken from the Communication from the Commission to the Council of the European Parliament, where e-government is defined as: "the use of information and communication technologies (ICT) in public administration combined with organizational changes and new skills to improve

services and processes. democratic and strengthening support for public policy". (Communication..., 2003) E-government understood in this way will be something much broader than just the availability of administration services provided electronically (accentuated by e.g. the USA, Japan, Korea), as the presented approach to e-government indicates for a deep reconstruction, modernization of the administration, based on ICT solutions, in order to make the public sector more open and transparent, and friendly to the citizen, showing an increase in efficiency (Bogucki, 2005, Dziadkiewicz, 2014).

Due to the degree of advancement of the IT communication of e-government with the citizen and the type and complexity of the services provided by the office (Olejniczak-Szuster, 2021), five levels of development of these services can be identified:

- level one – the administration runs an information portal,
- second level – performing complex activities on the portal, such as registration of: business activity, vehicles; communication only with individual offices,
- level three – there is a possibility of free switching between services, there is no requirement to provide the same data a second time; only with individual offices,
- on the fourth level – there is a system that searches for and retrieves the data necessary to carry out a specific operation; data are collected by the system from all available sources (registers or records); communication with many offices – integration phase,
- fifth level – individualisation of cooperation between institutions and users; it is possible to take into account the non-standard situation of the applicant (Rzucidło, 2015).

The task of the state administration, by launching e-administration, is to be even more effective, but for this it is necessary to have an appropriate level of access to Internet services with equipment and digital education (Kuzior, Mańka-Szulik, Krawczyk, 2021, Kabus, 2017).

Education aimed at the "information society", ie citizens with an appropriate level of skills/qualifications, will ensure the possibility of using websites, portals or e-administration applications (UNESCO, 2018).

The aim of this article will be to determine whether the remote way of dealing with official matters is imposed on Polish citizens, or whether they themselves expect the possibility of contact with the state administration in this way.

1.2. ePUAP platform – appointment time, possibilities of using and types of services offered

In Poland, the basic form of internet access to public services is the Electronic Platform of Public Administration Services (ePUAP). It was launched in 2008 and is a free tool for contacting citizens with public administration, as well as communication between public entities, as public authorities would be obliged to start accepting documents in electronic form on 1 May 2018 (pursuant to Art. section 1 of the Act of September 18, 2001 on electronic signature) (Gov.pl, 2022).

You can use ePUAP only with confirmation of your identity, which can be done in two ways, using:

- electronic signature – data (identifying a specific person) in electronic form, which serve as a signature equivalent to a handwritten signature; commercial product.
- trusted profile (eGo) – this is a data/ signature that only confirms the identity of a given person by assigning it to a specific PESEL number; non-commercial product (Łesak, 2022).

Due to the non-commercial nature, the needs of Poles and a much simpler form of access – the trusted profile is much more popular than the electronic qualified signature (in 2019 it is a ratio of 2.5 million to 500 thousand).

Based on the data presented in “Digitization – Website of the Chancellery of the Prime Minister”, it can be concluded that from January 2018 to today, the number of users of a trusted profile in Poland doubles (approximately) every year (Cyfryzacja..., 2022).

Thanks to the electronic signature and trusted profile, citizens' trust in e-administration increases that their data is safe (Alzahrani, Al-Karaghoul, Weerakkody, 2017, pp. 164-175).

Table 1.

Services provided on the ePUAP platform

Services for citizens	Business services
<ol style="list-style-type: none"> 1. send a general letter to a public entity, 2. file an application for a European Health Insurance Card (EKUZ), 3. report the loss or damage of the ID card, 4. submit an application for an ID card, 5. submit an application for a copy of a marital status certificate, 6. submit a request for a certificate of the right to vote at the place of residence on the day of the election, 7. submit a notification on entering or adding a voter to the roll of voters in another circuit, 8. submit a notification about the completion of the reported geodetic or cartographic works, 9. submit and check settlement documents at ZUS and US, 10. submit an application for business registration, 11. arrange official matters for your family: baby benefits, parental benefits, Large Family Card, Benefit from the Alimony Fund, 12. submit an application for annulment of a decision, provisions on – land and building records, land classification, 13. certify the documents developed by contractors of surveying works, 14. submit an application for disclosure of public information, 15. file an application for registration in the Water Company of a water company or association of water companies, etc. <p>ePUAP is a platform on which other websites and registers provide their services, including:</p> <ol style="list-style-type: none"> 1) Universal Electronic System of Population Register PESEL 2) Central Register of Vehicles and Drivers CEPiK 3) Central Register of Issued and Canceled Passport Documents CEWiUDP 4) National official register of entities of the national economy REGON 5) National Official Register of the Territorial Division of the Country (TERYT) 	<ol style="list-style-type: none"> 1. Public procurement – Central Portal 2. Customs declarations 3. Business registration 4. Tax on legal entities 5. Permits and certificates 6. Sending statistical data 7. VAT 8. Compulsory social insurance

Source: own study based on *Serwis – ePUAP, gov.pl*.

The ePUAP Electronic Services Platform directs its services to citizens, like and entrepreneurs. As shown in Table 1, the range of public services provided on the ePUAP internet platform is very wide, as it applies not only to various types of offices, but also to their departments. In addition, the discussed portal contains the so-called links redirecting to the websites of offices, thus making the website address more reliable and saving the user unnecessary contact searches.

1.3. The level of implementation of e-administration solutions in Poland compared to the European Union countries

The European Commission research for 2020 shows that Poland increases its result by only 1% compared to the previous year, which does not change its position in the ranking of the 27 EU Member States and places it in 24th place in the edition of the index ranking (DESI) (Milek, Nowak, 2021).

Table 2.

Poland against the background of EU Member States in the edition of the Digital Economy and Society Index (DESI) ranking for the beginning of 2021 (report for 2020)

	Poland		UE
	place	result	result
DESI	24	41,0	50,7

Source: Komisja Europejska (2020), Indeks gospodarki cyfrowej i społeczeństwa cyfrowego na 2021 r. Polska; <https://ec.europa.eu/newsroom/dae/redirection/document/80596>.

The reports of the Central Statistical Office on the information society in Poland in 2021 are much more optimistic about the development of Polish e-government. We learn from them that almost half of people aged 16-74 use e-administration services.

Table 3.

People using e-government services via the Internet

Description	2019	2020	2021
	in %		
People using the services of public administration via the Internet	40,4	41,9	47,5
to:			
searching for information on public administration websites	24,9	27,2	29,4
downloading official forms	24,6	25,4	27,4
sending completed forms	31,4	33,5	39,9

Source: own study based on – GUS, *Spółeczeństwo informacyjne w Polsce*.

The data from the latest GUS report published for 2021 (Table 3) clearly shows that there is a constant increase in the number of people using e-administration services in our country. Moreover, the pace of this growth recorded in 2021 is much higher (and amounts to 5.6%) than in the previous year 2020 (1.5%).

The same report by the Central Statistical Office reports that in 2021, 92.4% of households had Internet access in Poland, which was 2.0% more than in the previous year.

The covid_19 pandemic is indicated as the reason for such a sharp increase in interest in dealing with official matters via the Internet (the delay may result from equipment shortages at suppliers and the need to settle tenders).

Another research document relating to the assessment of the level of development e-government, is the Capgemini report.

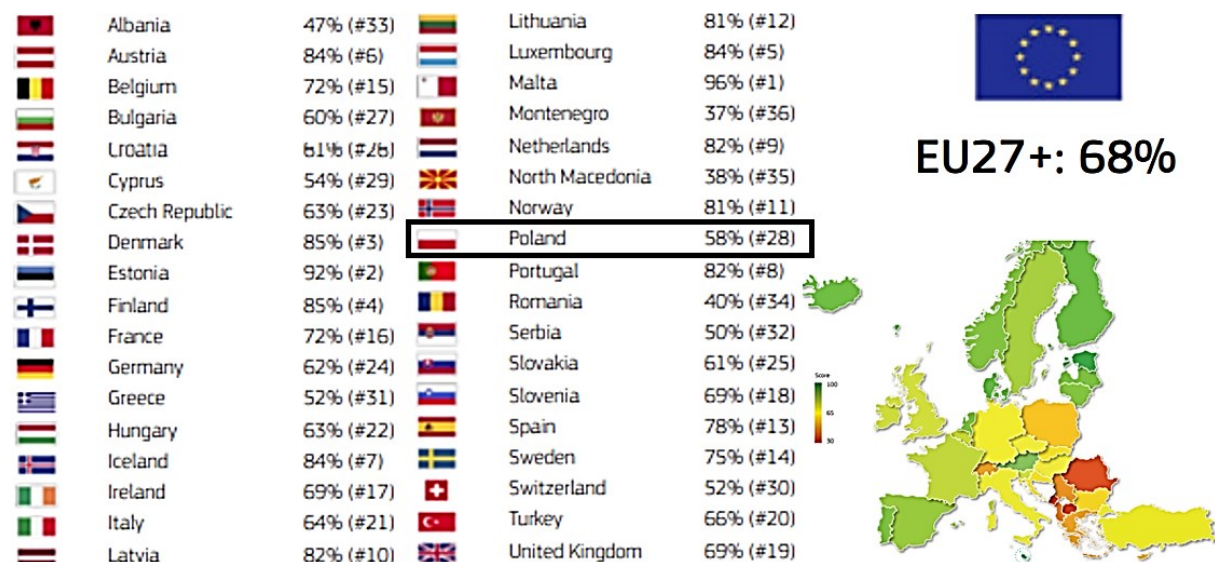


Figure 1. General maturity of electronic administration in the country (October 2021). Adapted from: Raport Capgemini: *eGovernment-Benchmark 2021*.

The Capgemini report differs slightly from the previous ones because it concerns the general maturity of e-government in the surveyed country and it includes not only the results from EU countries, but also from e.g. Great Britain, Iceland, Turkey (a total of 36 countries/ including 27 EU). Although the results of this study rank the overall maturity of Polish e-administration quite high, as they rate it at 58%, in the overall ranking of the surveyed countries it gives Poland only 28th place.

The presented reports differ only in minor details (e.g. 41% in 2020 and 41.9% in another report), however, the overall picture of e-administration is very clear - in Poland there is a constant increase in the use of e-services. -administration. On the other hand, a moot point could be the pace of this growth, which still does not allow us to reach the EU average and places us in the "tail" of the Member States.

1.4. Benefits and costs of implementing e-government solutions

The method of dealing with matters in the office remotely, online, despite the many benefits it brings, also generates costs:

- benefits: service from home – without travel, i.e. cheaper, without wasting time on travel, i.e. shorter, with the possibility of simultaneous supervision over household tasks (children, lunch, washing, etc.); without queues and the possibility of transmitting biological viruses – especially useful during a pandemic or other threats limiting mobility; outside the official opening hours of the office – the possibility of settling the

matter at any time (also at night); the possibility of reducing employment by the office – reduction of fixed costs;

- weaknesses of e-administration: the need to have an Internet connection (both on the part of the office and the applicant) – costs; link quality limited by the location and capabilities of the internet service provider; bandwidth – this is demonstrated by applications for subsidies in which the order of applications decides about their granting; (on the applicant's side) the need to have equipment to support the link / (on the office's side) the need to install servers 24 hours a day – hardware, premises, installation, service, depreciation, electricity costs; the need for appropriate software office / applicant – costs; service skills – properly trained administration employees of the institution; appropriate courses / training or general e-knowledge level of applicants; security (risk of losing personal data and means of payment; risk of activating computer viruses) – costs and multi-level authentication activation procedure – e-signature; trusted profile (confirmation: bank account, SMS code, e-mail, code cards); the need to connect many databases with each other – offices: tax, provincial, municipal, communal (their many departments); data from courts, prosecutor's office, police (e.g. fines, powers - to direct or possess); banking institutions; social assistance (income, disability group, chronic disease – ZUS; support programs for e.g. children up to 18 years of age, large families); etc.

A systematic division of benefits and costs (financial and non-financial) resulting from the use of e-government was presented by Brodnicki K., Kubiszewska K., Tymoszek E. (Brodnicki et al., 2012).

From the list of e-administration benefits and costs presented, the numerical advantage of the former can be seen at first glance, and a careful analysis of them shows large financial savings (especially in the long term), as well as improved comfort of access to the office and increased speed and the number of cases handled.

1.5. Social conditions determining the propensity to use digital solutions

Although it may seem that it is only our will, skills and possession of equipment that determine the use of e-administration opportunities, it turns out that also the age of the citizen, and more specifically entering this age in a specific age range, plays a significant role in using the solutions. electronic.

The ranges discussed here determine the generations of people who perceive the world in a similar way, due to the formation of their views and preferences on the basis of the same civilization achievements.

Leńczuk J. describes the generational differences in the approach to work and the preferred method of contact resulting from technical and technological progress, it can be said that:

- Baby Boomers – (prefer personal contacts) They are the oldest people in organizations (usually bosses) born after World War II until 1964; the time of their youth and school fell on a period when it was not possible to communicate quickly over a distance (at that time, pen, letters, telegrams); if they want to use electronic communication, they have to learn it from scratch, and this is naturally more difficult at such a late age (McCrindle, Fell, 2021).
- Generation X is very close to the BB generation (e.g. it celebrates direct communication and does not like changes). The form of communication developed by this generation is a telephone conversation via a mobile (mobile) phone.
- Millennials (because they entered the labor market after 2000), that is generation Y (1980-1994). In this generation, a computer (PC) and a portable computer (laptop) appeared in common access, which influences their preferences for e-mail communication, with reaching for the previous generation's tool, i.e. the telephone.
- The last generation is Z. The symbol of the communication device of this generation is a smartphone, which makes it possible to be online practically everywhere, so Y-s choose e-mail, SMS and instant messaging (Leńczuk, 2015).

Currently, the X and Y generations dominate the labor market in Poland, while the Z-you are just entering the market, and the BB's are retiring. The preferred method of communication resulting from the development of civilization during the youth / school period of a given generation may affect the way of communicating with the office, as well as the general attitude to the development of e-government solutions, therefore this issue will be analyzed in the context of the research carried out in the further part of this study (Report Newspaper, 2017).

2. Methods

5 large cities in Poland (Gdynia, Gliwice, Kielce, Rzeszów, Toruń) were selected for the survey, and then a survey questionnaire was created for the purposes of the survey, containing 10 closed or semi-open, scaling questions and birth certificate questions.

Due to sanitary restrictions and other pandemic requirements, as well as access to telephone databases, the research itself was commissioned to the market and public opinion research company "Market Research World" from Gliwice, which on December 15, 2021 conducted a quantitative study using the technique CATI (and supporting techniques) on issues related to the terminology of "Smart City".

For the purposes of the project only, dedicated two-way helplines have been created, with a prefix appropriate to each city covered by the study. Moreover, the following were also made: compilation of telephone databases; 8 main databases were developed, each with 10,000 mobile phone numbers (on average, 94% up-to-date) and 20,000 fixed-line numbers (15% up-to-date).

Before starting the research, both the databases and the research tool were piloted, and on this basis, the correctness of the survey scripting and the updating of the databases were determined.

The very process of obtaining data consisted in conducting telephone interviews supported by the Voice bot technology. It is a technology for automatic voice communication with telephone interlocutors (recording with information about the project and its goals, with a request for consent to participate in the survey). If the respondent expressed interest in participating in the survey, he was connected with a free consultant in a call center who conducted the survey on the basis of a survey questionnaire.

The use of the Voice bot technology meant that the interviewer did not encounter refusals (the recordings could be listened to, and the interviews could be conducted simultaneously), which made it possible to complete all 2,500 surveys in one day (with traditional interviewer-respondent contact, the survey would take 7 minutes and 56 seconds; in the case of technique used on average 4 minutes 15 seconds). Each call center interviewer made an average of 10 interviews/hour, and the response rate of people interested in participating in the survey, the so-called response rate was 4.7% (Market Research World, 2021).

A purposeful selection of the research sample was used based on the following parameters:

- the number of surveys conducted in: Gdynia, Gliwice, Kielce, Rzeszów and Toruń – 20% of the surveys from each city,
- gender of respondents – 50% of men and the same number of women.

The largest group of respondents (36.3%) had – secondary education; 25% each – basic vocational and higher education; just over 11% - basic; and in a trace (1.2%) there were representatives of lower secondary education.

The representatives were the most numerous age group 65+ (23.5%); 35-44 years accounted for about 20%; and the least numerous group of people were those in age 15-24 years of age about 10%; the remaining 5-year ranges ranged from 6.7% to 8.6%.

3. Results – social assessment of the need to expand (develop) remote handling of matters in the city hall and municipal units

When asked about the need for e-government development, the respondents answered as follows: on a 5-point scale, they assessed the need to extend the remote handling of matters in the office at an average of 3.84 (3.91 women and 3.77 men); this need is most noticed by people aged 35-54 (result 3.92); slightly weaker in the 25-34 and 55-64 age groups (3.85 and 3.86, respectively); they perceive the worst (but still very high, above 3.7) the need to extend remote handling of official matters in the 15-24 and 65+ age groups (3.71 and 3.76, respectively).

As for the relation of education to the need for e-administration development, the following were: it ranked highest on the scale of persons with primary and higher education (3.93); slightly lower with secondary education (3.84); and the lowest with basic vocational and lower secondary (3.72 and 3.68, respectively).

Taking into account the answers to the question in Chart 1 given in the examined cities, the following are: apparently this need to increase the scope of matters handled with the office is seen in Gliwice (3.96); slightly less in Kielce (3.87); and the worst in Rzeszów (3.79), Toruń and Gdynia (3.8 each).

On a 10-point scale, the respondents answered whether they saw official matters that cannot be settled via the Internet, and such a possibility should be created. The average assessment of the perception of such matters by the respondents is 7.4 / 10: the inhabitants of Gliwice see the most (9.4); then Gdynia (8.2); Toruń (7.0); Kielce (6.4); and the lowest in Rzeszów (5.8).

Such cases are most often identified by people with higher education (9.0); then medium (8.3); primary (8.0); and the least with basic vocational (4.3).

The correlation of answers to the same question with age and gender has shown that the fact that there are matters that cannot be settled via the Internet, and it should be possible, is most often noticed (indicator 8.0-8.3) by young people 15- 24 and older over 55 years of age; the remaining age ranges only scale the perception of the discussed issues slightly lower (index 6.4-6.9). The correlation of the question with the respondents' gender did not show any significant regularity.

4. Discussion

Based on the conducted research analyzes, it can be unequivocally stated that there is a need to expand (develop) remote handling of matters in city offices and municipal units. Taking into account the cities in which the survey was conducted, this need is noticed:

- the most in Gliwice 3.96/5; and the least in Rzeszów, Toruń and Gdynia 3.8/5,
- most by women 3.91/5; in the case of men, the ratio is 3.77/5,
- most in the age group 35-54 years (X and Y) 3.92/5; least among people aged 15-24 (Z) 3.71/5 and 65+ (Baby Boomers) 3.76/5,
- mostly by people with primary and higher education; the least with lower secondary and vocational,
- 3.84/5 on average.

The respondents' attitude to the possibility of indicating the types of matters that cannot be settled via the Internet, but it should be possible, was as follows:

- such matters were most often noticed in Gliwice (by 9.4% of respondents); least in Rzeszów (5.8%),
- similarly by men (7.4%) and women (7.3%),
- the most in the age group 55-64 (Baby Boomers) (8.3%); 15-24 (Z) (8.2); among 65+ (8%); least among people aged 35-44 (Y/X) (6.4%); 25-34 (6.6%),
- most by people with higher education (9%); the least with basic vocational (4.3%),
- on average 7.4%.

Despite the high result of the social need for e-government development (3.84 out of a maximum of 5), it should be noted that the least e-government is the generation Z (3.71) and BB (3.76).

"The types of matters that cannot be settled via the Internet and there should be such a possibility", are noticed by an average of 7.4% of respondents:

- most often in cities where the level of e-administration implementations is high (it proves a great public interest),
- most among the BB and Z generations, that is, "leaving" and "entering" the labor market. While the resistance to remote contact with the office is understandable among the oldest (Bylok, 1988) (e.g. problems with operating devices such as: PC/laptop/tablet/smartphone), such a ratio among the youngest generation on the labor market must raise concern (resistance may result, for example, from with: problems with using the smartphone application – the size of the virtual buttons in relation to the screen and finger; this generation is the least numerous, hence the parents from generations X and Y relieve Z in many areas of life, including contacts with offices),
- The representatives of generations X and Y see the least shortcomings in the e-administration system (these generations are the most numerous in Polish society – which is currently conducive to the development of e-administration).

5. Summary

The conducted literature study and the analysis of data from empirical research allow for the formulation of the following final conclusions:

- not only in Poland, but in the countries of the entire European Union, there is a lot of pressure to adopt digital solutions (saving time and money, sealing systems, quick generation of reports, etc.) (Commission Comm. ..., 2006; Straus, Tuulik, 2007);

- current legal regulations in Poland leave the citizen free to choose the form of communication with the office – administrative proceedings may be conducted electronically on the initiative of a party or another participant in this procedure (Article 391 § 1 points 1-2 of the Code of Civil Procedure) or on the initiative of a public administration body, but with the consent of the party or another participant (Article 391 § 1 point 3 of the Code of Civil Procedure) (Wajda, 2015, pp. 275-278). On the other hand, the obligation to communicate by electronic means is when submitting the offer, application for admission to participate in the procedure and declaration. This communication takes place between the contractor and the contracting authority (Article 10a (5) of the Act of 29 January 2004 - Public Procurement Law, i.e. Journal of Laws of 2017, item 1579 as amended, hereinafter referred to as the Public Procurement Law) (Błażewski, 2018);
- Poland, despite the progress, is among the least developed countries e-government in the EU;
- development of digital skills of society, including those related to e-government (and the e-administration itself), allows for better coping with crisis situations of the covid_19 type (e.g. protective measures - the so-called shields, social support, etc.);
- by connecting ("seeing") many systems and reporting e-government, it is possible to project appropriate policies aimed at raising the functioning of the administration to a higher level and maintaining it;
- Polish citizens, residents of large cities, want to develop an electronic form of contact with the office (3.84 out of a maximum of 5); they are most often representatives of the X and Y generations;
- the BB and Z generations are the most resistant to e-administration; Due to the fact that Z-th are entering the labor market and will start their own families (hence the growing need to deal with official matters), it is necessary to more precisely diagnose the reasons for their resistance to remote contact with the administration and take remedial steps as soon as possible.

References

1. Alzahrani, L., Al-Karaghoul, W., Weerakkody, V. (2017). Analyzing the critical factors influencing trust in e-government adoption from citizens' perspective: A systematic review and a conceptual framework. *International Business Review, Elsevier, vol. 26(1)*, pp. 164-175.
2. Błażewski, M. (2018). Zasada powszechności elektronicznej administracji. *Folia Iuridica Universitatis Wratislaviensis, vol. 7(1)*, pp. 229-242.

3. Bogucki, D. (2005). eGovernment w Unii Europejskiej. *Elektroniczna Administracja, nr 1*.
4. Brodnicki, K., Kubiszewska, K., Tymoszek, E. (2012). E-administracja w ujęciu jakościowym i finansowym. *Zarządzanie i Finanse, R. 10, nr 3, cz. 3*, pp. 55-64.
5. Byłok, F. (1998). *Cechy lokalnego rynku pracy w świetle literatury przedmiotu. Funkcjonowanie lokalnych rynków pracy w aspekcie badań nad bezrobociem. Studium teoretyczno-empiryczne*. L. Milian (ed.). Częstochowa.
6. Communication from the Commission to the Council, the European Parliament, The European Economic and Social Committee and the Committee of the Regions. *The Role of eGovernment for Europe's Future*, Bruksela 2003, COM (2003) 567, p. 7.
7. *Cyfryzacja – Serwis Kancelarii Prezesa Rady Ministrów*, <https://www.gov.pl/web/cyfryzacja/11-milionow-polakow-z-profilem-zaufanym>.
8. Dziadkiewicz, M. (2014). Centre of Social Integration as a tool of professional reintegration of the permanently unemployed in Czestochowa. *Polish Journal of Management Studies, Vol. 9*, pp. 23-33.
9. Gov.pl (2022). *Serwis Rzeczypospolitej Polskiej*; <https://www.gov.pl/web/gov/zalatwiaj-sprawy-urzedowe-przez-internet-na-epuap>.
10. GUS (2021). *Spółeczeństwo informacyjne w Polsce*, https://stat.gov.pl/download/gfx/portalinformacyjny/pl/defaultaktualnosci/5497/2/11/1/spoleczenstwo_informacyjne_w_polsce_w_2021_r.pdf.
11. Kabus, J. (2017). External Stakeholders in Higher Education Governance. *Ekonomika i Organizacja Przedsiębiorstwa, nr 9(812)*, pp. 32-41.
12. Komunikat Komisji do Rady, Parlamentu Europejskiego, Europejskiego Komitetu Ekonomiczno-Społecznego oraz Komitetu Regionów (2006). *Plan działania na rzecz administracji elektronicznej w ramach inicjatywy i2010: przyspieszenie wprowadzenia elektronicznych usług administracji publicznej w Europie z korzyścią dla wszystkich*, COM 173 wersja ostateczna; <https://eur-lex.europa.eu/legal-content/pl/ALL/?uri=CELEX%3A52006DC0173>.
13. Kuzior, A., Mańka-Szulik, M., Krawczyk D. (2021), Changes in the management of electronic public services in the metropolis during the covid-19 pandemic. *Polish Journal of Management Studies [PJMS], Vol. 24, No. 2*.
14. Leńczuk, J. (2015). *Litery dzielące generacje – o różnicach między pokoleniem X, Y i Z*, <https://stapler.pl/hydepark/litery-dzielace-generacje-o-roznicach-miedzy-pokoleniem-x-y>.
15. Łesak, D. (2019 - publication, 2022 - update). *Profil zaufany a podpis elektroniczny. Czym się różnią?*, <https://poradnikprzedsiębiorcy.pl/-profil-zaufany-a-podpis-elektroniczny-czym-sie-roznia>.
16. Market Research World (2021). *Podsumowanie wyników badania. Badanie ilościowe technika CATI w tematyce zagadnień związanych ze terminologią Smart City*. Gliwice 15.12.2021.

17. McCrindle, M., Fell, A. (2021). *Generation ALPHA*; <https://mccrindle.com.au/wp-content/uploads/infographics/Generation-Alpha-Infographic-2021.pdf>.
18. Miłek, D., Nowak, P. (2021). Rozwój usług elektronicznej e-administracji publicznej w Polsce na tle Unii Europejskiej. *Nierówności Społeczne a Wzrost Gospodarczy*, nr 65(1).
19. Olejniczak-Szuster, K. (2021). *Przedsiębiorca społecznie odpowiedzialny: motywy strategii działania w dobie pandemii COVID-19*. Częstochowa: Wydawnictwo Politechniki Częstochowskiej.
20. Raport Capgemini (2021). *eGovernment-Benchmark 2021*, <https://www.capgemini.com/wp-content/uploads/2021/10/eGovernment-Benchmark-2021-Insight-Report.pdf>.
21. Raport Newspoint (2017). *Pokolenia w Polsce i potrzeba monitorowania ich rosnącej aktywności*, <https://www.newspoint.pl/blog/raport-newspoint-pokolenia-w-polsce-i-potrzeba-monitorowania-ich-rosnacej-aktywnosci>
22. Rzucidło, J. (2015). *Elektroniczny rząd*. Warszawa: Wydawnictwo Sejmowe.
23. Straus, I., Tuulik, T. (2007). *Establishing A Company Takes Only Two Hours In Estonia*, <http://www.mondaq.com/article.asp?articleid=47610>.
24. UNESCO (2018). *Umiejętności cyfrowe o kluczowym znaczeniu dla miejsc pracy i włączenia społecznego*, <https://en.unesco.org/news/digital-skills-critical-jobs-and-social-inclusion>, 30.09.2020, cyt. za: Kowalska-Chrzanowska, M., Krysiński, P., Karwowski, M.P. (2021). Kompetencje cyfrowe mieszkańców województwa kujawsko-pomorskiego w świetle polskiego projektu szkoleniowego „E-active”. *Educ. Inf. Technol.*, 26, 3427-3444, <https://doi.org/10.1007/s10639-020-10411-0>.
25. Wajda, P. (2015). *Komentarz do art. 391*. In: R. Hauser, M. Wierzbowski (eds.), *Kodeks postępowania administracyjnego. Komentarz*. Warszawa: C.H. Beck, pp. 275-278.