
Social Participation in the Information Society: Poland Compared to the European Union Countries

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Abstract:

Purpose: The purpose of the considerations undertaken in the article is to analyze the level of citizen participation in the information society in Poland in the context of the formation of this phenomenon in EU countries, and to identify areas requiring intervention by state or local government bodies.

Design/Methodology/Approach: The following research methods were used in the article to achieve the stated purpose of the work: critical analysis of the literature on the subject, the method of cause-effect analysis, the method of comparative analysis and the method of case analysis.

Findings: The analysis carried out indicates that the basic indicators characterizing the participation of citizens in the information society in Poland significantly deviate from the level presented by EU member states. This dissonance is particularly evident in the case of people who do not use the Internet and do not have basic digital skills. This state of affairs makes these people unable to actively participate in the information society. This problem may be a significant barrier to the further development of the information society in Poland and requires the intervention of government and local administration.

Practical implications: The results of the research can provide important information for state and local government bodies and educational institutions in the development of the information society.

Originality/value: The research conducted in the article points to an important issue in the formation of widespread participation of citizens in the information society in Poland and contributes to the solution of this problem.

Keywords: Digital social participation, information society, internet.

JEL classification: A14, P52, R11.

Paper type: Research article.

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1. Introduction

The information society can be defined as an entity based on advanced information and communication technologies, the use of which determines the functioning and development of civilization in all its aspects (Maziarz, 2013). This socio-economic formation brings with it a number of benefits, both for states, social groups and individual citizens.

A prerequisite for its smooth and effective development, is widespread public participation in the information society, manifested in the use of information and communication devices to carry out social and economic functions, by citizens with adequate information skills (Maziarz, 2023). From this assertion arises the obligatoriness of actions on the part of government bodies and local governments, aimed at, increasing interest in the issue of access to and use of information and communication technologies, which guarantee global access to resources (Budziewicz-Guzlecka, Czaplewski, and Drab-Kurowska, 2018).

The issue of the use of information and communication technologies is an issue, complex and multidimensional, with a powerful impact on socio-economic development (Drab-Kurowska, 2010). Its significantly goes beyond, the traditional understanding of the term, related to physical access to hardware, software and network infrastructure of the Internet. It is important to look at this issue more broadly, through the lens of its four dimensions. These include (van Dijk, 2005):

- motivation - i.e., readiness (feeling or not feeling the need) to use ICT,
- material/physical access - having access to equipment that enables the use of ICT, such as a computer and the Internet,
- skills - having the necessary competencies and skills related to practical use from ICT,
- use - access related to the frequency, effectiveness and extent of ICT use.

A factor that conditions and determines the process of accessing information and communication technologies is motivation, which can vary in nature. Some people, when making the decision to realize access and use ICT, are guided by the need for development, interests, the desire to maintain relationships and belong to a group, or awareness of the benefits that the technologies in question bring.

Others, on the other hand, decide to use ICT as a result of pressure from existing regulatory solutions, the nature of the work they undertake, the conditions under which they use education, health care or public administration. As an example of such behavior, consider the solutions used during the COVID-19 pandemic, which forced the widespread use of ICT in many areas of citizens' life and work activities in many countries. When conducting a consideration of motivation in accessing ICT, it is also important to pay attention to factors that are demotivating.

Among the most important is the fear of new technological solutions, caused by a sense of insecurity, danger and lack of understanding of the nature of ICT. This problem mainly affects older, uneducated people, usually living in rural areas, as well as people with disabilities. These people consciously opt out of interacting with ICT by excluding themselves from digital reality (Budziewicz-Guzlecka, 2010; 2019).

Another dimension of access to ICT is material access, related to the need to have a suitable computer device and access to the Internet. In this case, access to ICT is undoubtedly economic in nature. Accordingly, the cost of acquiring equipment and subscriptions for network access can be a significant barrier for some people limiting their ability to access ICT. This issue relates to the ability to obtain desktop or portable (laptop) computing devices, the prices of which can be quite significant.

However, access to information and communication technology at the basic level is also made possible by the cell phone models (smartphones) currently in use, the acquisition of which no longer represents such a serious financial expense. All the more so since the fee, both prepaid and postpaid, includes limited Internet access in the subscription plans. If one additionally takes into account the fact that the EU average in terms of mobile penetration is 132.4% and Internet access is 117.9% (State of the Market Report..., 2022), one can assume that access to ICT in material terms should not be a significant problem.

Another dimension of ICT access is digital competence and skills. These should be defined as "confident, critical and responsible use of and interest in digital technologies for learning, work and participation in society. They include information and data literacy, communication and collaboration, media literacy, digital content creation (including programming), security, intellectual property issues, problem solving and critical thinking" (The Council of the European Union, 2018).

The last dimension of ICT access is related to the practical use of information technology. Individuals functioning at this level are better educated than the majority of the population and use very sophisticated, ICT-based applications practically, for learning or work, while the rest of the population limits their use of the Web to e-mail, information review, e-commerce or electronic payments.

This state of affairs is due to the fact that individuals differ in the level of information awareness, which should be understood as "the ability of the mind to reflect reality requiring the use of information and information technology to ensure the development of both the individual and society as a whole in all areas of life" (Batowska, 2009). This concept is subject to hierarchy and gradation, so that depending on the sophistication of the level of information consciousness, a part (majority) of society can be assigned the dimension of access to information and

communication technology at the level related to use and only a few at the level of use.

The dimensions of access to information and communication technology outlined above reveal the sequence of decisions that a citizen must make in order to actively participate in the information society and to be fully rational in it.

2. Research Methodology

The primary sources of data used in the article are materials based on research and reporting by the European Commission of the European Union, the Central Statistical Office, the OECD, GFK, Fiberhost, Statista and the National Media Institute. Theoretical considerations were based on the available literature treating the problems of the information society and information and communication technologies.

In order to achieve the stated purpose of the paper, the following research methods were used in the article: critical analysis of the literature on the subject, causal analysis method, comparative analysis method and case study method.

3. Data Analysis

When proceeding to analyze the digital participation of citizens in the information society, it should be mentioned that not all data for individual areas of the EU are available, and some of them are difficult to compare, as they refer to different years, hence the need sometimes to reach for older information.

The level of digital participation of citizens is a reflection of the state of advancement of the information society in a country and at the regional level (Budziewicz-Guzlecka and Drab-Kurowska, 2017). For this reason, analyses in this area of social activity are justified and should be conducted fairly systematically. When starting an analysis of the level of participation of Polish and EU citizens in the functioning of the information society, it should begin with issues related to the motivation to use ICT-based solutions, primarily the Internet. The first issue to be considered in this thematic area is the problem of those who have never used the Internet. Data on this matter, by EU country, are shown in Table 1.

The data presented in Table 1 shows that the problem of the lack of any citizen activity on the Internet, affects most member states. Only Ireland was able to meet the challenge and bring virtually all citizens to use the Internet. Poland is only ranked 20th in the list in question, with a result of 11.14% of people never using the Internet. This result is more than 3 percentage points higher than the average of EU countries. It indicates that a significant part of Poland's population, more than 3.5 million of the country's citizens, is excluded from functioning in the information

society and cannot fully enjoy the associated benefits. It is worth addressing the reasons why such a significant group of people, never decided to become active in the Internet environment.

Table 1. *Percentage of people who have never used the Internet in EU countries in 2021.*

Lp.	State	Percentage of people who have never used the Internet (%)	Lp.	State	Percentage of people who have never used the Internet (%)
1.	Ireland	0,07%		European Union	7,70%
2.	Denmark	0,69%	15.	Slovakia	7,75%
3.	Luxembourg	1,17%	16.	Slovenia	7,82%
4.	Denmark	1,37%	17.	Cyprus	8,72%
5.	Finland	2,01%	18.	Hungary	9,93%
6.	The Netherlands	3,49%	19.	Lithuania	10,71%
7.	Belgium	4,55%	20.	Poland	11,14%
8.	France	4,84%	21.	Italy	11,25%
9.	Spain	4,86%	22.	Romania	11,36%
10.	Austria	5,92%	23.	Malta	11,59%
11.	Germany	6,19%	24.	Croatia	14,91%
12.	Latvia	6,22%	25.	Portugal	15,61%
13.	Estonia	6,51%	26.	Bulgaria	17,02%
14.	Czech Republic	7,25%	27.	Greece	19,86%

Source: <https://www.statista.com/statistics/1246262/eu-people-who-never-used-the-internet/>.

When conducting considerations related to the participation of citizens in the information society, it is also necessary to take into account a very important issue, which is access to appropriate hardware, software and services for accessing the Internet infrastructure. As mentioned above, this problem is economic in nature and, therefore, will be treated differently in different member states, depending on the purchasing power of their citizens.

Taking into account the fact that the average purchasing power of a Polish resident is about 56% of the European average (Purchasing Power Europe 2022), there is no doubt that the level of computerization in Poland will differ significantly in level from Western European countries. Complete data related to the amount of computer equipment at the disposal of households in the member states has not been published for several years.

For this reason, in the following part of the work will be presented only partial data and relating to further periods. The lack of data on computer equipment in EU statistics is probably due to the fact that it is the basic equipment in households at the current level of development of the information society.

Unfortunately, in Poland it is still difficult to access for certain social groups for financial reasons. This is evidenced by the results of research, according to which the lack of adequate financial resources limits the possibility of purchase (Digital Inclusion..., 2022):

- appropriate computer equipment-at 22%,
- access to Internet network infrastructure-at 15%.

In Poland, according to data from 2022, ownership of computer equipment is declared by only 70.1% of households, of which laptops account for 62%, desktops 17.9% and tablets 17.2% (Media Services..., 2023). There is a correlation that the amount of computer equipment increases depending on the size (size) of the household, the age structure of household members and having children.

For comparison, it should be added that in 2022 in Germany, 92% of households had computer equipment, of which 42.9% were desktop computers and 84.8% were mobile devices (Statista, 2023). In contrast, according to 2017 data, 97.6% of households in the Netherlands had computer equipment, 92.8% in Sweden, 86.9% in Estonia, and 85.1% in Belgium (OECD, 2017).

In the case of Poland, data from previous years indicated a higher level of household computerization. The decline in the number of households with computer equipment is explained by the phenomenon of substitution by smartphones. In addition, a program is currently being implemented in Poland, which assumes that every year, every fourth-grade student (9-10 year old children) receives a laptop computer on his or her own, which he or she can use freely, including, above all, for studying and developing his or her own interests. Clearly, such measures will increase participation in the Internet, especially in rural areas and in families with low financial resources.

To use the Internet, individuals, especially those who are less digitally active to participate in the information society, do not need a computer or laptop. To some extent, these rather expensive devices can be replaced by suitable models of cell phones (smartphones). It is worth recalling at this point that the penetration of cell phone services in Poland is 142.8% (with an EU average of 132.4%) and mobile Internet access is 214% (with an EU average of 117.9%) (Market Status Report...,

2022). So, theoretically, every Polish citizen, should have a cell phone and thus have access to the Internet. Unfortunately, this is not the case in Poland (Media Services..., 2023):

- A cell phone is found in 96.9% of households in Poland,
- smartphones are at the disposal of only 84.5% of households.

The above data shows that about 15.5% of households in Poland have cell phones that do not allow Internet access or do not have any. It should also be added that fees for Internet access services in Poland are among the lowest in the EU. In the case of mobile access, both prepaid and postpaid, limited Internet access is included in subscription plans. In practice, this means that only those in poverty cannot afford to buy the simplest device and tariff plan to access ICT.

A very important issue in the context of active participation in the information society is the digital skills of citizens (Budziejewicz-Guzlecka and Drab-Kurowska 2020). In principle, digital skills should be treated as a prerequisite for functioning in the digital world, since their absence makes it possible to talk about digital exclusion of citizens of a secondary nature.

A characteristic feature of digital skills is the need for their continuous improvement. This is due to the fact that technologies are developing dynamically, new digital solutions are appearing and to use or exploit them, new skills are still needed. This problem affects both those who do not have digital skills and those who have such skills at different levels of proficiency.

The knowledge of digital skills is aging very rapidly, and as a result, it is now possible to talk about the need for lifelong digital skills upgrading. For this reason, it is useful to be aware of how the problem of digital skills is shaped practically in the realities of the information society in EU member states. Table 2 shows the share of citizens with at least basic digital skills in each EU country in 2021.

Table 2. *Share of citizens with at least basic digital skills in each EU country in 2021.*

Lp.	State	People with at least basic digital skills (%)	Lp.	State	People with at least basic digital skills (%)
1.	Finland	79,18%	15.	Slovakia	55,18%
2.	Netherlands	78,94%	16.	Belgium	54,23%
3.	Ireland	70,49%		European Union	53,92%
4.	Denmark	68,65%	17.	Greece	52,48%

5.	Sweden	66,52%	18.	Latvia	50,88%
6.	Spain	64,16%	19.	Cyprus	50,21%
7.	Luxembourg	63,79%	20.	Slovenia	49,67%
8.	Croatia	63,37%	21.	Hungary	49,09%
9.	Austria	63,33%	22.	Germany	48,92%
10.	France	61,96%	23.	Lithuania	48,84%
11.	Malta	61,23%	24.	Italy	45,60%
12.	Czech Republic	59,69%	25.	Poland	42,93%
13.	Estonia	56,37%	26.	Bulgaria	31,18%
14.	Portugal	56,31%	27.	Romania	27,82%

Source: https://ec.europa.eu/eurostat/databrowser/view/ISOC_SK_DSKL_I21__custom_2397093/bookmark/table?lang=en&bookmarkId=dc481686-c938-4e07-b03c-8e039f532857

The data presented in Table 2 clearly show that Poland, in terms of the spread of digital skills of its citizens, deviates significantly from the average level of EU countries. Poland is ranked only 25th in this comparison, which testifies almost to the digital illiteracy of Polish society. This is the only way to describe the situation, when the value of the analyzed indicator in Poland is 11 percentage points below the average of the Member States, and the leader of this ranking, Finland, has achieved a value of the indicator at almost 80%.

The share of citizens with at least basic digital skills at the level of 42.93%, is a factor very strongly limiting the development of the information society, both in economic and social terms. It is also difficult to talk about the universality of citizens' participation in the digital society in such a situation.

4. Discussion

The analysis of data presented in the article indicates that in terms of active participation of citizens in functioning in the information society, Poland ranks well below the average of EU member states. This is a very unfavorable situation, as it promotes digital exclusion of those citizens who do not want to use digital technology, are unable to acquire computer equipment or do not have adequate digital competence. These people make up a significant percentage of society, and their exclusion seriously affects the functioning and development of the country as a whole.

The analyses carried out allow us to conclude that problems with active participation in the information society are mainly experienced by older people, poorly educated, with low financial resources, not working, (usually of their own volition), living in small towns and rural areas, and disabled. In Polish conditions, these are individuals or groups of people, relatively inactive socially, focused on themselves and their problems. The rapidly changing digital reality is not accepted by them and they reject it.

Hence the decision not to use the Internet, even when there is access to it in the household. Traditional solutions related to adult education and training in Poland are not used on a large scale. For example, about 5.5% of the total population aged 25-64 participated in adult education and training in Poland in 2021, when at the same time the average of EU countries is 11% and Sweden, which leads the list, reached almost 35% (Poland in the Union..., 2022). What is more, it can be said that in Poland, additional training is provided mainly to people who have higher education and want to increase their competence.

Meanwhile, this form of education leaves out people who have not received digital education at the school level, and therefore do not have even basic digital skills. That's why there are currently high hopes for Digital Development Clubs, which should be located in every Polish municipality. Their goal should be to break down the mental barrier against using the Internet (acting on the level of motivation) and to point out the benefits of digital skills, primarily in terms of contacts with public administration, health care, the education system or electronic banking. Social media activity is also important (Drab-Kurowska, 2012; Drab-Kurowska 2012).

The problem may be the financing of this endeavor and the difficulty of getting excluded people to the places where the training will take place. Therefore, a better solution would be to use mobile educational teams that would train citizens in digital competencies in individual towns and villages.

The analysis carried out showed that the participation of Poles in the information society is also determined by the lack of access, by a large group of citizens (almost 30%), to computer devices enabling the use of technology-information and communication. This problem stems from the difficult economic situation of some social groups in Poland, for whom the purchase of a computer or laptop is too great an expense. Some people compensate for the lack of computer equipment with the purchase of a smartphone, which has become a device commonly used to connect to the Internet.

Assistance from the administration is related, that the program mentioned above, the transfer of laptops to students in the fourth grades of elementary school. In addition, for people with disabilities, hardware, software and necessary peripherals can be financed from the State Fund for Persons with Disabilities.

The measures outlined can, to some extent, improve the level of active participation of citizens in the information society. However, one should be aware that the process of achieving widespread public participation will take a long time.

5. Conclusion

Comparing the advancement of digital participation in Poland with European Union member states, it should be noted that the degree of its development in Poland is at a

relatively low level. Such a state of affairs does not allow for the proper development of the information society, since the existence of a large number of people functioning outside the digital reality does not allow for the abandonment of many traditional forms of implementation of life and work activities, including the provision of public services, access to health care, or education.

From the point of view of the state, this entails an additional financial and organizational burden. However, the most important issue is the social problems faced by individuals and social groups who have been, as a result of their own or systemic negligence, excluded from digital activity.

The state, as the guarantor of meeting the social needs of citizens, must take measures to include individuals and social groups in the information society. The only way to do this is through digital literacy education and assistance in accessing information and communication technologies.

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