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DIGITAL ACTIVITY OF POLISH SMALL ENTERPRISES

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Purpose: Digital transformation affects all spheres enterprises operate in regardless of their size and industry. Its impact is analyzed by the representatives of various sciences and business practitioners as well as. The objective of the article is to present theoretical and empirical research on the digital activity of Polish small enterprises.
Design/methodology/approach: Two methods were used to achieve the objective. The method of literature review consisted in the analysis of literature in the field of digitalization and digital transformation. It gave the foundation for the development of methodological assumptions. The diagnostic poll method with the use of the survey technique was employed to conduct the empirical study among Polish small enterprises. The results of the research allowed the organizations' activity to be assessed.
Findings: The study indicated that the digital activity of Polish small enterprises is not satisfactory. Their innovation is low, investment in ICT is sporadic and insufficient. Predominantly, the enterprises implement ICT solutions which do not require expert digital competences. The surveyed companies recognize the benefits of digitalization and its significant impact on opportunities for development. Digitalization is hampered by fears of incurring high costs, necessity of employing IT specialists or supplementing digital competences of the management and employees.
Research limitations/implications: The present study examined the issue of digital activity of small enterprises and enabled the adopted research assumptions to be verified. Prospective research may analyze the digital activity of the surveyed enterprises in terms of age, size and industry groups.
Practical implications: The research allowed practical problems of digitalization of small businesses to be identified. A consecutive round of the study conducted in the following year would be worthwhile in order to analyze the dynamics of digital transformation in this sector.
Originality/value: The originality of the research consists in introducing the concept of digital activity of enterprises and its assessment exclusively in relation to small enterprises, which are the weakest link in the SME sector.

Keywords: small enterprises, digital activity, digital transformation.

Category of the paper: Research paper.

1. Introduction

The digital revolution and related scientific and technical changes are transforming the world of business. They modify the nature and intensity of competition. They become the main driver of innovation and change in the majority of industries and sectors of the economy. They lead to the reorganization of management systems and the creation of digital business models. Technological progress not only contributed to the improvement of internal processes of enterprises, but also stimulated a change in the behavior of various groups of stakeholders that shape the environment and affect their functioning. Businesses need to adapt to the requirements of the digital economy and be highly active in the digital domain. This is a particularly difficult challenge for small business organizations, which as opposed to large businesses, do not have such financial, human and technological resources at their disposal.

The issues of digitalization are discussed by the representatives of various fields of science, such as management, philosophy, sociology, IT, and ecology. According to J.S. Brennen and D. Kreiss, the term digitization denotes "the material process of converting analog streams of information into digital bits". In turn, the authors define the term digitalization as "the way many domains of social life are restructured around digital communication and media infrastructures" (Brennen, Kreiss, 2016). In Polish, both terms have a single word (cyfryzacja) as the equivalent. Additionally, they are frequently used in literature alternately because they are strongly interrelated.

The concept of digital activity, similarly to the issue of digitalization, is not clearly defined. According to the Great Dictionary of the Polish language, the term activity refers to "taking actions of a specific kind and performing them predominantly in a lively, intense way" (Wielki słownik..., 2022). With reference to this definition, we propose to consider digital activity as the involvement of an enterprise in undertaking intensive activities in the field of Internet and ICT use.

Micro, small and medium-sized enterprises constitute the dominant group of economic entities in Poland and the European Union. Additionally, their number has been systematically growing in recent years. In Poland, their share in the total number of enterprises is 99.8%, and reflects the EU average. However, the structure of this sector in Poland diverges from the EU average – there are more micro entities (in Poland 94.9%, EU average 93.0%), while fewer small (4.2% and 5.9%) and medium-sized (0.7% and 0.9%) organizations (PARP, 2022). This may indicate that many micro and small enterprises do not develop and fail to transform into medium and large enterprises (Fundacja Warsaw Enterprise Institute, 2017). This is especially true of small businesses employing 10 to 49. Every year, their number dwindles. They have the smallest share in the generation of GDP and jobs among all groups of enterprises. They are characterized by low innovation. The transition of enterprises from the

small to medium scale is impeded by various barriers of an exogenous and endogenous nature (Mieszajkina, 2020).

Problems related to the development of this group of enterprises in the SME sector became an inspiration for the assessment of how they fare as regards the digital reality. The objective of the present research is to examine the digital activity of Polish small enterprises.

2. Digital activity of small enterprises

There is no single commonly used definition of digital transformation. According to C. Gong and V. Ribiere, the transformation is "a fundamental change process enabled by digital technologies that aims to bring radical improvement and innovation to an entity (e.g., an organization, a business network, an industry, or society) to create value for its stakeholders by strategically leveraging its key resources and capabilities" (Gong, Ribiere, 2021, p. 10). K. Oh et al. (2022) argue that the digital transformation concerns social change activities that are undertaken by the enterprise. This is possible owing to the improvement of the business model by introducing new digital technologies that allow to provide greater value for the customer. When analyzing the essence of digital transformation, special attention should be paid to three aspects of the phenomenon. The first assumes that it is closely related to modern technologies. The second aspect, organizational in nature, concerns the introduction of changes into business models or their replacement with new ones. The third aspect, social, indicates that it is a phenomenon that significantly affects every area of human life (Reis et al., 2018).

The digital activity of an enterprise consists in implementing new and streamlining existing internal processes in such a way that they become based on modern ICT. It often leads to a modification of the business model towards its digitalization. As a consequence, the efficiency of the company's operation is increased and new opportunities for development are generated. In order for the digitalization process to be effective, it is crucial that the social subsystem and organizational culture are remodeled, thus adapting them to the needs of the new reality. The key to success lies in employees and their commitment to the continuous improvement of their digital competences.

M. Oberländer et al. (2020) consider digital competences as a combination of knowledge, skills, abilities and other characteristics of an employee that are required to perform work in a digital environment. They divide them into elementary and specific. The former refer to daily tasks that an employee performs while working: using email and instant messaging, basic Microsoft Office software, etc. The latter concern enterprise-specific tasks and refer to specialized software requiring advanced digital competences at an appropriate level. The lack of adequate digital competences causes increasing difficulties in the performance of work by employees of all areas and levels of management. The involvement in their development will

be greater if the employer facilitates access to appropriate training and courses (Bergson-Shilcock, 2020).

The level of digitalization of small enterprises is affected by several social, technological, economic, environmental, political and legal factors related to values (Gudanowska, Kononiuk, 2020). The strength and direction of impact largely depend on the digital activity of the entity, which in turn is influenced by digital competences possessed by the management and staff. Five levels of digitalization of enterprises can be distinguished (Buchner, Zaniewska, 2016; Mieszajkina, 2020):

1. total digitalization – basic and organizational activities require the application of digital solutions,
2. majority digitalization – ICT is not a prerequisite for maintaining the continuity of basic and operational activities. It is used to increase the efficiency of operations,
3. partial digitalization – digital solutions are exploited to a limited extent in certain areas of operations,
4. fragmentary digitalization – using individual, simple digital tools to simplify certain operations,
5. minimal digitalization – the use of digital tools on a very limited scale, often due to the need to adapt to the requirements of stakeholders.

The Covid-19 pandemic accelerated the digital transformation of not only large but also small businesses. This is evidenced by the data presented in the report titled "European Small and Medium-Sized Enterprises (SMEs)" drafted by Digitally Driven among 5011 SMEs (including 301 from Poland). Since the beginning of the pandemic, 80% of SMEs have increased the use of digital tools. The report distinguishes three groups of enterprises depending on the level of digital tools' use (Digitally Driven, 2021):

1) "advanced" companies that prioritize and actively use several digital tools. As a result, they achieve higher business performance and a higher level of transformation, innovation and effectiveness. In Poland, 47% of companies represent this group, while the European average amounts to 42%;
2) "insecure" companies behaving in the opposite way when compared to the first group represent 11% in Poland, contrasted by the European average of 18%;
3) "developing" enterprises are in the process of shifting from the second group to the first group and are at different stages of digital transformation. In Poland, they account for 42%, while the average in Europe is 40%.

Slightly different data is presented in the report titled "Investments in technologies in the era of the 2022 pandemic. New challenges for SMEs: digitalize or economize?" (Inwestycje w technologie w dobie pandemii 2022. Nowe wyzwania MŚP: cyfryzować czy oszczędzać?), which was delivered by the DigitalPoland Foundation. According to the report, the Polish small business does not fully exploit opportunities emerging from digitalization and new technologies. This is particularly valid for small businesses – they exploit much less ICT than

medium and large enterprises and to a greater extent depart from their western competitors. Their attitude towards digitalization is to economize and to postpone investments in new technologies (DigitalPoland Foundation, 2022).

The above data apply to the entire SME sector. However, small businesses have a lower level of digitalization compared to medium-sized and large ones. This is evidenced by the index of digital intensity proposed by Eurostat. It is calculated on the basis of 12 parameters describing the use of ICT. It is very low and low in the case of 89.6% of small enterprises, 75.4% of medium-sized and 43.3% of large enterprises (CSO, 2021). There are several reasons for such a fact – the need to incur, at times, significant costs associated with IT infrastructure and software, the lack of appropriate competences and employability of IT specialists, the lack of time and ability to remodel existing processes, and apprehension linked with the need to adapt to new legal regulations (Mieszajkina, 2020).

Like never before, small businesses need the ability to exploit opportunities efficiently and avoid risks connected with digitalization. Digital transformation is multidimensional and covers most fields the company and employees operate in. It consists in continuous growth and introduction of adaptive changes related to the constant development of ICT. It frequently requires complete rebuilding or redefinition of intra-organizational processes. Rapid implementation of digital changes can be a key factor determining the success of small businesses.

3. Research methodology

The test procedure applied in the study involves several stages. The starting point was an in-depth review of the literature on the operation of contemporary organizations in the conditions of digital transformation, especially in relation to small businesses. The following research problem was formulated: Do Polish small enterprises fully exploit the potential of the Internet and ICT? The answer to such a question will allow to obtain information necessary to achieve the objective, i.e. the assessment of the digital activity of Polish small enterprises.

The following hypotheses were developed:

H1: Small businesses do not have an efficient innovation management system, thus investment in ICT is sporadic.

H2: Small business employees have insufficient advanced digital competences, thus the Internet and ICT are mostly used for mundane, everyday activities.

H3: Small enterprises use quite a wide range of digital solutions, mainly intended for communication with clients.

H4: Small businesses recognize the outcomes of using the Internet and ICT. However, they do not achieve them in full due to concerns regarding digitalization.

Appropriate research methods and techniques were selected to achieve the objective and verify the hypotheses. The method of literature review was used to formulate research assumptions and develop the research tool. An in-depth analysis was conducted encompassing numerous scientific sources on digital transformation and digital activity in the SME sector. Subsequently, consultations were carried out with six experts in order to verify the research tool. The experts were managers and IT specialists with practical knowledge in the field of management and ICT. In order to collect data from respondents, the diagnostic survey method and the web survey technique were used. The questionnaire contained 14 questions and consisted of a substantive part (nine questions) and demographics (five questions). The study was executed in April-May 2022. It examined a random sample of enterprises (N = 292) employing from 10 to 49 people. The data were collected by means of the CAWI method. Table 1 presents the structure of the research sample.

Table 1.
Structure of the sample

Specification	Total sample N = 292	Number of persons employed by the organization:			
		10-19 N = 95 (32.5%)	20-29 N = 81 (27.7%)	30-39 N = 58 (19.9%)	40-49 N = 58 (19.9%)
Age of the enterprise (in %)					
15+ years	47.6	14.0	12.3	8.9	12.3
9 – 14 years	27.4	9.6	7.5	5.5	4.8
3 – 8 years	18.8	6.9	5.5	4.8	1.7
Less than 3 years	6.2	2.1	2.4	0.7	1.0
Industry (in %)					
Production	20.2	5.5	7.2	3.4	4.1
Commerce	22.3	8.2	5.8	4.1	4.1
Services	49.3	16.1	12.3	10.6	10.3
Civil Engineering	8.2	2.7	2.4	1.7	1.4
Business location (in %)					
City over 300,000	27.7	12.0	4.8	5.1	5.8
City between 100,000 and 300,000	20.9	5.5	6.2	5.5	3.8
City between 20,000 and 100,000	24.3	8.2	6.9	5.5	3.8
City under 20,000	9.9	3.1	3.1	1.4	2.4
Village	17.1	3.8	6.9	2.4	4.1
Area of operations (in %)					
Local	41.4	15.4	10.6	6.9	8.6
Domestic	42.8	12.3	13.4	10.3	6.9
International	15.8	4.8	3.8	2.7	4.5

Source: own research.

4. Research results and analysis

Digitalization is a multi-faceted process. It requires action to be taken in virtually all areas of the enterprise's operation. This requires focus and time on the part of the management.

In a small business, where the owner frequently performs as the only manager, it is difficult to reconcile the tasks of digitalizing the business with the daily responsibilities of efficient management. The survival and development of a small enterprise are determined by both the attitude of the owner and the employees. The future of the enterprise depends on their involvement in the implementation of various innovative projects. In order to verify hypothesis 1, the respondents were asked two questions: about the approach to innovation, and concerning investments in ICT in their companies. The data are presented in Tables 2 and 3.

Table 2.
Approach to innovation in enterprises (in %)

Specification	% of enterprises
We did not introduce any innovations in the past two years, we anticipate neither innovation-related activities nor research and development.	22.26
We are technologically ready for innovation, but we do not implement it due to the lack of innovation management skills.	22.95
In the past two years we introduced or attempted to introduce innovations, we are beginning to develop an innovation management system.	29.79
Over the past two years, we systematically implemented an innovative process, in some cases, when implementing innovations, we cooperated with other entities.	17.47
For several years, we have been implementing a strategy based on innovative activity and research and development, we systematically introduce innovations, we cooperate with other entities in the development and implementation of innovations.	7.53

Source: own research.

Table 3.
Investments in ICT in enterprises (in %)

Specification	% of enterprises
We do not invest in digital technologies because we do not have such needs.	18.84
We recognize the need to invest in digital technologies, but we do not do so for financial reasons, lack of knowledge in this field or for other reasons.	17.12
We scheduled investments in certain digital technologies.	26.37
We invest in digital technologies when we have free funds.	11.64
We invest in key digital technologies by acquiring necessary financial resources (own or external).	16.10
We invest in digital technologies systematically and in a planned manner.	9.93

Source: own research.

Table 2 shows that the level of innovativeness of the surveyed enterprises is low. More than 45% of them did not implement innovations in the past 2 years, and one fifth have not even scheduled such activities. Merely a quarter of entities systematically implement the innovation process in cooperation with other entities. Less than 30% of respondents declare the occasional implementation of innovations and the launch of the development of an innovation management process. This approach translates into the introduction of ICT solutions. Less than 40% of companies invest in ICT in a more or less systematic way. More than 17% of entities recognize such a need, but for various reasons do not pursue it. Additionally, more than 26% are only planning to invest in certain ICTs. It is surprising that almost a fifth of the respondents do not see the need in this respect. A detailed analysis of the responses revealed that the lack of

a systematic approach to innovation management manifested by small enterprises (the first three responses from Table 2) translates into disorganized ICT investment (the first four responses from Table 3). Therefore, hypothesis 1 that small enterprises do not have an efficient innovation management system can be deemed confirmed. As a consequence, investments in ICT are sporadic.

In order to verify hypothesis 2, respondents were asked two questions. The first concerned digital competences of employees: a) in possession, b) requiring enhancement and development, c) not required by the company. Table 4 outlines the compilation of responses. In each block, competences (information-related, communication-related, problem solving, software use, programming) are ranked from simpler to advanced.

Table 4.
Digital competences of employees of enterprises (in %)

Specification	In possession	Requiring development	Not required
Information-related			
Acquisition of information from public administration websites	38.36	43.84	17.81
Operations on files online (cloud solutions)	30.82	44.52	24.66
Search for and analysis of information (about goods/services, markets, etc.)	31.85	47.60	20.55
Communication-related			
Sending/receiving email	53.77	37.67	8.56
Membership in social networks	30.48	43.84	25.68
Online voice/video chats	36.30	45.89	17.81
Problem-solving			
Online banking, sending electronic invoices	42.81	39.73	17.47
Installing software and applications	32.88	44.86	22.26
Changing software settings, including operating system or online security software	26.03	48.29	25.68
Buying and selling online	25.00	43.15	31.85
Using software			
Using Microsoft Office	44.86	43.84	11.30
Using graphics editors, photo, video and audio editors	23.97	47.95	28.08
Programming			
Writing code in a programming language	13.01	40.75	46.23

Source: own research.

A considerable number of enterprises (at the level of 40-50%) declare the possession of simpler digital competences in all blocks. It is worth noting that approx. 40% of the surveyed entities recognize the need to enhance and develop all the digital competences listed in the survey. This is more relevant for more advanced competences: related to changing software settings, using graphics editors, photo, video and audio editing software, and searching for and analyzing information (approximately 48% of respondents report such a need). A significant minority of enterprises do not require their employees to possess specific digital competences (from 9% to 26% for individual competences). The most advanced competences constitute an exception. Programming skills are not required by 46% of enterprises, online sales and the use of graphics software are not required by approx. 30%.

The second question pertained to activities undertaken by means of the Internet and ICT. Respondents rated individual activities on a scale from 1 – we do not use, to 5 – we use constantly. The results are presented in Table 5.

Table 5.
Activities for which enterprises use the Internet and ICT (in %)

Specification	Rating					Weighted average rating
	1	2	3	4	5	
Communication with stakeholders	0.68	3.42	13.70	21.58	60.62	4.38
Search for information	0.68	5.48	22.60	28.77	42.47	4.07
Banking	5.82	4.79	19.86	25.00	44.52	3.98
Customer service	7.53	8.22	25.00	28.42	30.82	3.67
Invoicing	11.64	5.48	23.29	28.77	30.82	3.62
Automatic exchange of data with external entities	9.59	7.19	25.00	33.22	25.00	3.57
Data analysis and processing	9.93	8.90	27.05	28.77	25.34	3.51
Administration	11.30	9.93	27.05	28.08	23.63	3.43
Brand building	14.38	8.22	25.00	29.11	23.29	3.39
Advertising	16.44	7.88	23.63	26.37	25.68	3.37
Remote work	15.75	11.30	23.63	27.05	22.26	3.29
Employee recruitment	21.92	9.93	23.29	27.40	17.47	3.09
Programming	19.86	11.99	27.40	23.29	17.47	3.07
Sales	26.71	8.56	19.52	24.32	20.89	3.04
Image/graphics creation	25.34	10.62	23.29	26.03	14.73	2.94

Source: own research.

Small enterprises predominantly use the Internet and ICT to communicate with stakeholders, search for information and to do online banking (the weighted average rating is approx. 4 and above). These activities do not require any specific digital competences. More complex activities such as image/graphics creation, sales, programming, recruitment, Internet and ICT are used much less frequently (weighted average rating below 3.2). This means that these activities are either pursued using traditional tools or are not carried out at all.

Concerning hypothesis 2 that the employees of small enterprises do not possess sufficient advanced digital competences, the analysis of data presented in Tables 4 and 5 allows the hypothesis to be confirmed. Therefore, it can be argued that the Internet and ICT are usually used for mundane, everyday activities.

Several questions were also used in order to verify hypothesis 3. By responding to the first, the respondents assessed digital solutions used by their enterprises (on a scale from 1 – we do not use, to 5 – we use constantly). The answers are presented in Table 6.

Table 6.
Digital solutions used by enterprises (in %)

Specification	Rating					Weighted average rating
	1	2	3	4	5	
Office software (e.g. Excel, Word, PowerPoint)	3.77	3.77	19.18	28.42	44.86	4.07
Company website	7.19	3.42	22.26	26.71	40.41	3.90
Social media	13.70	7.88	25.34	29.11	23.97	3.42
Electronic document management software	12.67	9.93	28.77	29.11	19.52	3.33
Cloud solutions (e.g. Google Drive, Microsoft OneDrive)	16.10	9.59	26.37	24.32	23.63	3.30
Web meetings (e.g. Teams, Zoom, Skype)	19.52	10.27	23.29	26.71	20.21	3.18
Online business listings (e.g. Google Business Profile)	16.78	11.99	28.08	22.95	20.21	3.18
Internet of Things devices or systems (e.g. smart locks, lighting, cameras, sensors)	24.32	8.90	27.40	23.63	15.75	2.98
Customer Relationship Management Software (CRM)	25.34	9.59	23.97	25.68	15.41	2.96
Software for comprehensive business management (e.g. ERP, Mindmeister, Canvas, Miro)	28.08	9.59	27.05	20.21	15.07	2.85
Analytical tools (e.g. Google Analytics)	26.03	10.27	28.42	23.29	11.99	2.85
Online sales and purchasing (e.g. Allegro, Ceneo, Amazon, Empik)	26.71	13.36	23.63	21.58	14.73	2.84
Sales platform (e.g. Shoper, Shopgold, Sky_Shop)	39.73	11.64	21.92	17.12	9.59	2.45

Source: own research.

The most frequently used digital solutions in the ranking are the simplest ones: Office software, company website, social media (weighted average rating at the level of 3.4-4). At the bottom of the hierarchy were the most complex ones – sales platforms, analytical tools, software for comprehensive business management (ratings below 2.9). Only 36 companies from the entire sample (12.3%) use all digital solutions very frequently or constantly, and merely four entities (1.4%) do not use any.

The respondents also offered responses to the question concerning the functions of the enterprise's website (Tab. 7).

Table 7.
Functions of the company website (in %)

Specification	% of enterprises
Presentation of products, goods, services and access to catalogs and price lists	46.92
Information about job vacancies, on-line submission of application documents	27.05
Links to the enterprise's profiles on social media	26.03
Enabling users to order custom made products/services	20.55
After-sales service (consumer support)	19.52
Online ordering or booking	18.15
Checking the status of an online order	17.81
We do not have a website yet	13.70

Source: own research.

More than 86% of small businesses have their own website. Almost half of the surveyed entities (47%) use them to present their offer. Only approx. 20% of them sell via the website.

In addition, the respondents provided information on the use of social media by their enterprises (Tab. 8).

Table 8.
Social media use by the company (in %)

Specification	% of enterprises
Social networking sites (e.g. Facebook, Linkedin, Goldenline, Google)	57.19
Services enabling multimedia to be shared (e.g. Youtube, Instagram, Tiktok, Flickr, Slideshare)	26.03
Blogs or microblogs run by the company (e.g. Twitter, Blogger, Tumblr, Present.ly)	15.07
Wiki information exchange tools	12.33
We do not use social media	20.89

Source: own research.

Seventy nine percent of companies use social media. Social networks are the most popular. A little over a quarter of respondents confirm sharing multimedia and running blogs, and slightly over a tenth – the use of Wiki information exchange tools.

Concerning hypothesis 3 that small enterprises use a fairly wide range of digital solutions, mainly intended for communication with customers, Tables 6, 7 and 8 suggest that the hypothesis was verified positively.

Hypothesis 4 was verified on the basis of three questions. First, the respondents assessed outcomes associated with the use of the Internet and ICT by the company (Tab. 9).

Table 9.
Outcomes related to the use of the Internet and ICT by enterprises (in %)

Specification	Outcome achieved	Outcome intended to be achieved	Digitalization cannot deliver the outcome
Reduction of time devoted to administrative tasks	51.71	35.27	13.01
Improvement of cooperation with business partners and acquisition of new ones	50.00	34.93	15.07
Improvement of company image	48.29	38.70	13.01
Efficiency increase regarding internal processes	46.92	35.27	17.81
Reduction of costs and losses	44.52	37.67	17.81
Increase in the number of clients	44.18	42.12	13.70
Products/services quality improvement	44.18	37.33	18.49
Boost of income	38.70	42.47	18.84
Entrance to new markets	35.62	34.93	29.45

Source: own research.

The vast majority of respondents are aware that owing to digitalization, enterprises obtain or can obtain a variety of outcomes. In approximately half of the surveyed entities, ICT contributed to reducing the time devoted to administrative tasks, improving cooperation and acquiring new business partners, and enhancing the company's image. The respondents also recognize other potential benefits, primarily a boost of income and an increase in the number of clients. Perhaps the desire to exploit these advantages translates into a declaration of readiness to expand the scope of ICT use in the future. It is surprising that almost one third of respondents do not associate digitalization with the opportunity for the company to enter new markets. Moreover, almost one fifth does not link it with an increase in income and an improvement in the quality of products/services.

The respondents were then asked what impact digitalization may have on the future of the company. The answers were rated on a scale from 1 – none, to 5 – very large, decisive. The distribution of answers is as follows: "1" – 1.71% of respondents; "2" – 5.82%, "3" – 27.74%, "4" – 41.1%, "5" - 23.63%. Thus, the respondents largely confirm that digitalization has a significant impact on the future of the business. What, if any, concerns do the respondents have? Table 10 contains data that allow an answer to this question to be obtained. The assessment was made on a scale from 1 – no concerns, to 5 – significant concerns.

Table 10.
Concerns of the company related to digitalization (in %)

Specification	Rating					Weighted average rating
	1	2	3	4	5	
Necessity of acquiring specialists or supplementing knowledge by the management and employees	8.56	10.27	37.67	31.51	11.99	3.28
Incurring high costs	8.56	11.30	38.70	30.48	10.96	3.24
Selection of inappropriate ICT	9.59	12.33	43.84	27.40	6.85	3.10
No expected outcomes	9.59	17.47	40.41	26.03	6.51	3.02
Employee resistance	12.67	18.84	40.07	19.86	8.56	2.93
Employment reduction	14.04	18.84	41.44	17.12	8.56	2.87

Source: own research.

The majority of enterprises are concerned with the need to attract specialists or to supplement knowledge (43.5% of respondents selected ratings "4" and "5") and the need to incur high costs (41.4%). The fewest are concerned with the resistance of employees (28.4%) and reduction of employment (25.7%). The weighted average rating for all items listed in the survey ranges from 2.8-3.3, i.e. it is at a moderate level. This may denote that respondents are aware of certain hindrances associated with digitalization. However, it is unlikely to contribute to a negative attitude towards the process.

The foregoing analyses revealed that hypothesis 4 can be deemed verified in its first part – small enterprises indeed recognize the outcomes associated with the use of the Internet and ICT. However, there are grounds for rejecting the second part of the hypothesis – concerns regarding digitalization are not significant. Due to the fact that approximately half of the surveyed entities did not obtain the outcomes of digitalization, other reasons should be considered. The main obstacle is the shortage of appropriate digital competences, especially among managers. Some optimism is associated with the fact that respondents manifest willingness to develop them and recognize the fact that digitalization is an inevitable process, regardless of the size and profile of the company.

Because the study was conducted during the ebb of the fifth wave of the COVID-19 pandemic, the respondents were requested to assess its impact on the course of digitalization of their enterprises. The distribution of answers is as follows: "stopped" – 1.71%; "slowed down" – 9.93%; "had no impact" – 50.68%; "forced to start" – 22.95%; "accelerated" – 14.73%. This is a very surprising result because most of the research carried out in the SME sector

confirms the fact that digitalization accelerated due to the pandemic (Digitally Dieven, 2021; DigitalPoland Foundation, 2022; PARP, 2022). These differences may be related to the fact that the studies cited above pertained to small and medium-sized enterprises, while the sample examined herein exclusively contains small businesses. In these entities, the digitalization process is slower.

5. Conclusions

The global digital revolution has significantly stimulated the digital activity of organizations of various types and sizes. Minimizing costs, improving efficiency and effectiveness, enhancing the quality of products/services, acquiring new customers, increasing competitiveness – these are only some of the benefits of digitalization. The present study allows a number of conclusions to be formulated. The vast majority of the surveyed small enterprises are just beginning to develop innovation management systems. They are not yet efficient and well-operating, which results in difficulties and delays in the delivery of investments in new technologies. Although the use of the Internet and ICT is declared by the majority of the respondents, they are mainly basic tools, not requiring advanced digital competences. These competences are at a low level and in need of improvement. This is one of the main problems of digitalization in small businesses. There is a lack of funds for investments in ICT and computer equipment, training, hiring highly qualified IT specialists, and for hiring the services of IT and consulting companies. The surveyed enterprises are aware that they may gain certain benefits as a result of digitalization. They have no major concerns and understand that this is an inevitable process.

The study revealed that Polish small enterprises are characterized by relatively low digital activity. This is a worrying phenomenon. If they delay the digital transformation, they may disappear from the market in the next decade. Digitalization is a significant change that requires professional management in order to be effective. A clear vision should be the departing point in the process. Instead of introducing individual, chaotic solutions, it is worth spending time and resources to develop an integrated digital business model. In practice, such a solution will be more beneficial for the company.

The digital activity of small enterprises will undoubtedly develop. In order for the process not to be overly slow, more support is needed from the authorities in terms of access to finance, infrastructure, tools, professional advice and training.

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