

ATTITUDES OF POLISH MANAGERS TOWARDS INFORMATION AND COMMUNICATION TECHNOLOGIES – SELECTED ISSUES

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Purpose: The aim of this article is to diagnose the attitudes of Polish managers towards the implementation and use of ICT technologies.

Design/methodology/approach: The paper is based on a review of the literature in the field on the application of ICT in the work of managers, research reports on the digitization of enterprises and an own research. The survey was conducted in 2001 among 163 companies located in Poland (16 provinces). The survey used a diagnostic survey method, CAWI technique and an author's survey questionnaire. The research results presented in the article are part of a research subject on digital leadership.

Findings: The analysis of the literature and the results of surveys indicate that managers have a low level of involvement in the process of digitization of enterprises. Despite their knowledge of the need to implement modern technologies, they do not take real steps in this direction. The results of the survey show that managers appreciate the facilitation of ICT, and what might seem to be an obstacle, such as the unlimited availability of the manager, is not a problem. Among the obstacles to the effective use of electronic means of communication, managers see first of all the low competence of employees and supervisors.

Research limitations/implications: Regarding the limitations of the digitization of organizations, it would be useful to know the perspective of employees. It should be especially concerned with the evaluation of digital competence of managers. The research results presented in the article are the result of self-assessment of managers, which may explain to some extent the high evaluation of their own digital competence in relation to other employees.

Originality/value: The paper has cognitive value. The results of the study can serve as a reference for further research aimed at identifying the degree of digitization of enterprises and the role of managers in it.

Keywords: Information and Communication Technologies (ICT), attitudes of managers towards the use of ICT, digitalization of organizations, means of electronic communication.

Category of the paper: research paper.

1. Introduction

Interest in the digitization of businesses undoubtedly stems from the benefits of ICT implementation, but also from the inevitability of the process. Nowadays, if a company wants to be competitive, it must incorporate modern technologies in its relations with stakeholders. In the Polish reality, an additional reason to pay attention to the problem of digitization of companies, is the need to catch up with the digital backwardness in relation to western companies.

According to the DESI (Digital Economy and Society) 2022 index, Poland is ranked 24th out of 27 EU countries participating in the survey in terms of digital competence. While we have managed to narrow the gap between EU countries in terms of human capital, Poland still has a long way to go in terms of integrating technology into businesses.

The pandemic caused by the SARS-COV-19 virus has forced the acceleration of enterprise digitization. The subsequent crisis related to the war in Ukraine, has contributed to the increased interest of Polish managers in cloud solutions. However, the crisis due to inflation may slow down the momentum of IT deployment. Already the 2023 survey shows, compared to 2022, a dramatic decrease in the percentage of companies declaring an increase in digital transformation spending from 21% to 14% (Digital Business Transformation Monitor, 2022, pp. 23-24 and 39, Digital Business Transformation Monitor, 2023, p. 3). The risk of a deceleration of digital transformation is very real, in line with the regularity indicating that companies' interest in ICT most often during and just after a crisis, after which the interest declines (Burgess, Conell, 2020).

The success of digitization of enterprises depends on many factors, among which the human factor is mentioned. This article pays special attention to managers, as those who are important applicants or decision makers of the purchase of modern technologies in the organization and should be the leaders of change. Managers' perception of the need and possibility of using modern means of electronic communication in the implementation of professional tasks, seems to be crucial. Superiors, more than once, are the reference point for employees on how actively and effectively modern means of electronic communication are or can be incorporated into work.

Research on the need for digital transformation of enterprises usually refers to determining the general level of awareness of managers in this regard. On a small scale, the reasons determining the diagnosed level of digital awareness of managers are inquired. The aim of the article is to diagnose the attitudes of Polish managers towards the implementation and use of ICT in enterprises in the aspects analysed. To achieve the goal, the analysis of secondary materials (research reports, compact publications, journals and Internet sources) and the results of our own survey, conducted among 163 companies located in Poland, were used. The survey used the diagnostic survey method and the CAWI technique. The article presents some of the results obtained within the framework of the research topic on digital leadership.

2. The role of the manager in the digitization of the organization and selected challenges faced by the manager

Companies investing in the purchase of modern information technology (IT), expect at least a return on their costs. "The productivity paradox of information technology" (the productivity paradox of information technology), widely discussed in the literature (e.g. Brynjolfsson, Hitt, 1998, pp. 49-55; Acemoglu, Dorn, Hanson, Price, 2014, pp. 394-399; Korzyński, 2018, p. 17; Wozniak, 2020, p. 108), and which consists in the lack of correlation between the amount of expenditures on implemented information technology (IT) solutions and measurable productivity indicators (Jelonek, 2016, p. 205), may constrain some managers.

Questions about the productivity of IT investments, however, do not necessarily end with a positive answer, since "all IT projects produce results, but not all results are evaluated as benefits" (Peppard, Ward, Daniel, 2007, p. 4 as cited in Jelonek, 2016, p. 212). Do not look for a direct translation of IT investments into productivity, as the success of IT implementation depends on the complementarity of changes in many areas (Arendt, 2016). E. Brynjolfsson (2005) lists seven, and clearly emphasizes human capital among them. Similarly, J. Peppard, J. Ward and E. Daniel, formulating 5 principles of value creation through IT implementation, point to the important role played by enterprise managers and users (2007, p. 4).

The human factor, in addition to technological and organizational, is cited as crucial to the success of an organization's digital transformation (Orłowska, Żołądkiewicz, 2018, pp. 97-99; Wozniak, 2020, p. 119), with management determination and having the right strategy emphasized (Digital Business Transformation Monitor, 2022).

In Polish companies, according to J. Wozniak, the integration of ICT into the management process in organizations is slow, and this is due more to a lack of managerial motivation than to technological or financial obstacles (Wozniak, 2020, p. 119). Therefore, it seems necessary to change the mentality of supervisors as responsible for the implementation of ICT into the organization and controlling and enforcing the correct use of ICT. According to research and literature, the problem concerns not only Polish managers (Burgess, Conell, 2020). The challenge in the digitization of the enterprise is to overcome the conservatism, inertia and resistance of managers to change, but also the reluctance of employees to what is new (Burgess, Conell, 2020; 13 Facts about Digital Transformation, 2020, p. 15; Digital Business Transformation Monitor, 2022, p. 42). What emerges from the 2019 survey is a conservative silhouette of the Polish manager who knows that the advancing technological revolution is necessary. "However, he does not want to get ahead of the rushing reality, preferring to safely go with the trend" (All Secrets..., 2019, p. 3). He relies on his own opinions, is reluctant to take inspiration and suggestions, and is reluctant to communicate with employees (All Secrets..., 2019, p. 4).

KPMG's 2022 research reports that awareness of the need for digital transformation among Polish managers is not exceptionally high. 67% of respondents answered that they attach great or very great importance to digital transformation. However, these declarations are not reflected in action. Companies strive to maintain the status quo (Digital Business Transformation Monitor, 2022, p. 14).

However, the process of integrating ICT into professional tasks is inevitable. In the case of a manager, it makes no sense today to talk about digital and non-digital leaders. ICT technologies have penetrated so heavily into private and professional life that today everyone must have digital competence at least to a basic degree. One can only speak of a digital leader native or immigrant (Sidor-Rządkowska, Sienkiewicz, 2023, pp. 225-226). The first has proficiency with modern technologies, among other reasons, because he grew up among them. The second had to learn how to function in the world of modern technologies, so the use of electronic means of communication is not always natural for him and does not come easily.

A manager's resistance to change as a consequence of the application of modern technologies in the organization may be related to reluctance or inability to change habits formed over decades. ICT technologies are redefining the forms and ways of doing work and the relationship between supervisor and employee. Telework, hybrid work, platform work, among others, are emerging (Śledziwska, Włoch, 2020, pp. 172-179; Sidor-Rządkowska, Sienkiewicz, 2023, pp. 39-40). Performing work remotely can raise questions about employee control, managerial authority and clout, clarity of communication or building strong teams, among others. Leading those performing remotely means for a manager needs to work based on trust and learn to evaluate work performance rather than behaviours which shows employee work. (Sidor-Rządkowska, Sienkiewicz, 2023, p. 163). Working with ICT means also poses a work-life balance challenge for both managers and employees (Cecchinato, Cox, Bird, 2015; Mikolajczyk, 2023, pp. 11-30). The possibility of using IT devices outside the workplace carries the risk of the manager being constantly available and overloaded with information. This is accompanied by excessive multitasking and stress, with a consequent decrease in efficiency (Mikolajczyk, 2023, pp. 11-30). These kinds of experiences can influence aversion to new technologies.

What is feared also brings benefits that managers should not forget, e.g. employment flexibility, increased employee engagement, satisfaction and motivation, time and money savings, competitive advantage, wider access to potential employees (Diaz, Chiaburu, Zimmerman, Boswell, 2012; Moczyłowska, 2021, pp. 41-43). The beneficial effect of working with ICTs was particularly noticeable during the Covid-19 pandemic.

3. Attitude of managers towards ICT in the organization - own research

3.1. Survey methodology and characteristics of the survey sample

The results presented here are part of the research conducted within the framework of the research grant entitled. "Leadership in light of the determinants of modern intellectual capital management and its impact on national security" (UGB No. 865/2021). The study was carried out by a diagnostic survey method using the Computer Assisted Web Interview (CAWI) technique and a proprietary survey questionnaire. The survey, was commissioned to the IPC Research Institute Ltd. Implementation of the survey took place in October and November 2021.

The responses of 149 individuals representing various companies were analysed. The selection of companies for the study was stratified randomly and included companies from 16 provinces in Poland.

IT managers (21 people), board members (24 people), company owners (26 people) and managers (78 people) were invited to the survey. Represented small enterprises with 10 to 49 people (40 respondents), medium-sized enterprises with 50 to 249 people (59 respondents) and large enterprises with more than 250 people (50 respondents). The following industries were included in the survey: trade (46 people), manufacturing (49 people) and services (54 people). The form of company ownership was also taken into account. A partnership was represented by 69 people, while a corporation was represented by 80 people. Companies with predominantly or exclusively Polish capital (122) and predominantly or exclusively foreign capital (27) took part in the survey. The degree of computerization of the company was also asked. No or low level of computerization of the company was declared by 5 people. A medium level of computerization of their company was indicated by 56 people, a high level by 63 people and a very high or total level by 25 people.

The PS IMAGO PRO 6.0 program was used to calculate the results. A certain limitation with the research results presented in the article is that only percentage results can be presented, without indicating correlations between variables.

Analysis of the literature and research reports, allows us to conclude that Polish managers are insufficiently involved in the digitization of the organization. The material presented in the article is an excerpt from the author's study and the basis for answering the research question: What reasons may underlie the low involvement of managers in the process of ICT implementation at work? The research hypothesis was adopted that says that managers are reluctant to implement ICT due to the fact that their time is too much absorbed and the distance between superior and subordinate is shortened.

3.2. Results of the survey

The effectiveness of modern electronic communications largely depends on correctly diagnosing the needs of the organization or target group and adapting modern electronic communications to them. Following fashions unthinkingly can result in financial losses, resulting from the purchase of hardware or software that no one will use. Managers are important applicants or decision-makers for the purchase of modern technologies in the organization, so their perception of the need and possibility of using modern means of electronic communication in the performance of professional tasks seems crucial. The attitude of managers to modern electronic communication means is also worth taking into account for the reason that superiors often, provide a reference point for employees on how actively and effectively modern electronic communication means are or can be incorporated into work.

Some of the questions in the survey questionnaire were devoted to the issue of managers' perceptions of modern means of electronic communication. It was also interested in the motives of managers to reach for them (Figure 1).

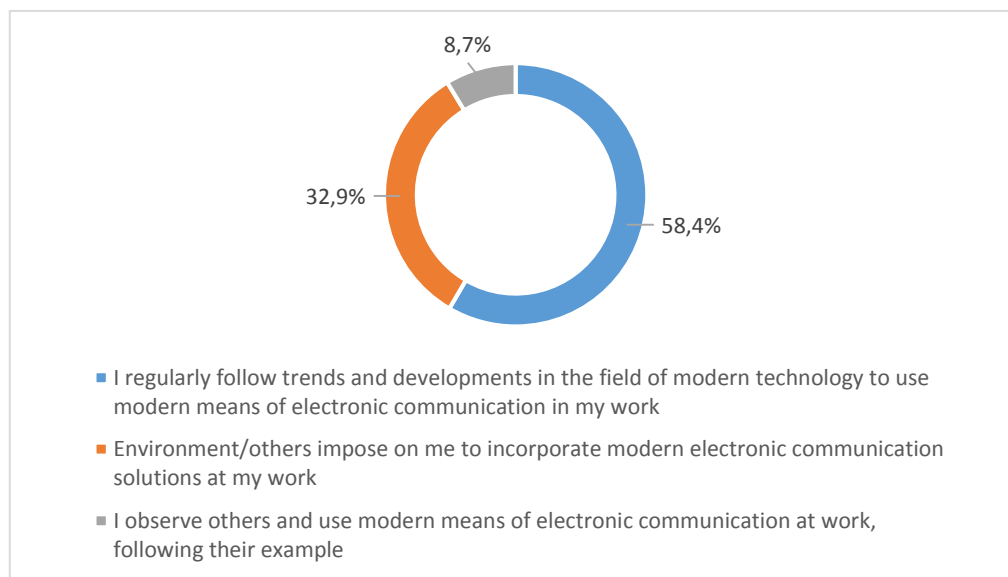


Figure 1. Motivations for using modern electronic communications at work - responses of managers (N = 149).

Source: own study.

In most cases (58.4%), respondents indicate that they are actively seeking news in the area of modern technologies. In other cases, others are the determinants for respondents to reach for modern technologies. Often through the need to adapt, for example, to customers, competitors, cooperators (32.9% of respondents), and sometimes by imitating other users in this regard (8.7% of respondents). Based on the responses that it is others who impose the incorporation of modern electronic communication solutions into the manager's work, we can conclude that in this group of respondents IT measures are adapted to the needs of the audience. However, it is puzzling to what extent the assumption of the need to adapt modern technologies to the

needs of the organization and the environment is fulfilled among the remaining respondents (67.1% of respondents).

How managers approach modern IT at work can be learned from Figure 2.

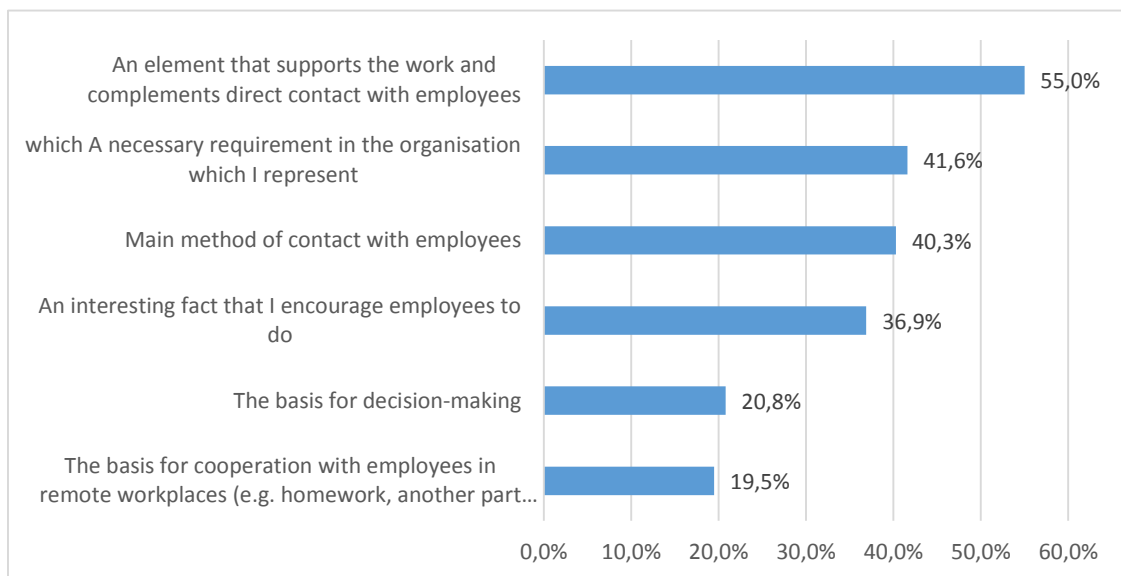


Figure 2. Basis for the use of modern technology in the manager's work (N = 149).

Source: own study. The results of the survey do not add up to 100%, due to the possibility of the respondent selecting more than one answer.

According to the survey, managers use modern technology most often as an element, supporting their work and complementing their direct contacts with employees (55.0% of respondents). This is understandable, as in many professions nowadays it is difficult to imagine working without support from IT means. The group of respondents indicating that modern technology is a necessary requirement in the organisation they represent (41.6%) accounts for a quarter of the respondents. Further groups of surveyed managers treat modern technologies at work as the main way they interact with employees (40.3% of respondents) or as a curiosity that they encourage employees to use (36.9% of respondents). A smaller group of managers use modern technologies as a basis for decision-making (20.8% of respondents). At a time when teleworking has become a more popular phenomenon than before, it may be surprising that a small proportion of respondents (19.5% of respondents) identified modern technology as a basis for collaborating with employees in remote workplaces (e.g. homework, another part of the country, the world). It is possible that part of the respondents' choices regarding this issue was included in the answer indicating IT as the main way to interact with employees. However, it is worth noting that when performing work tasks directly at the workplace, communication via IT may be the main means of collaboration.

On the one hand, digital tools streamline a manager's work (Flak, Hoffmann-Burdzińska, 2017), but on the other hand, they can act as a distractor, distorting information and limiting the building of group bonds, especially those supported by trust (Korzyński, 2018, pp. 17-23). The research conducted was interested in how managers evaluate the implementation of professional tasks through IT (Figure 3).

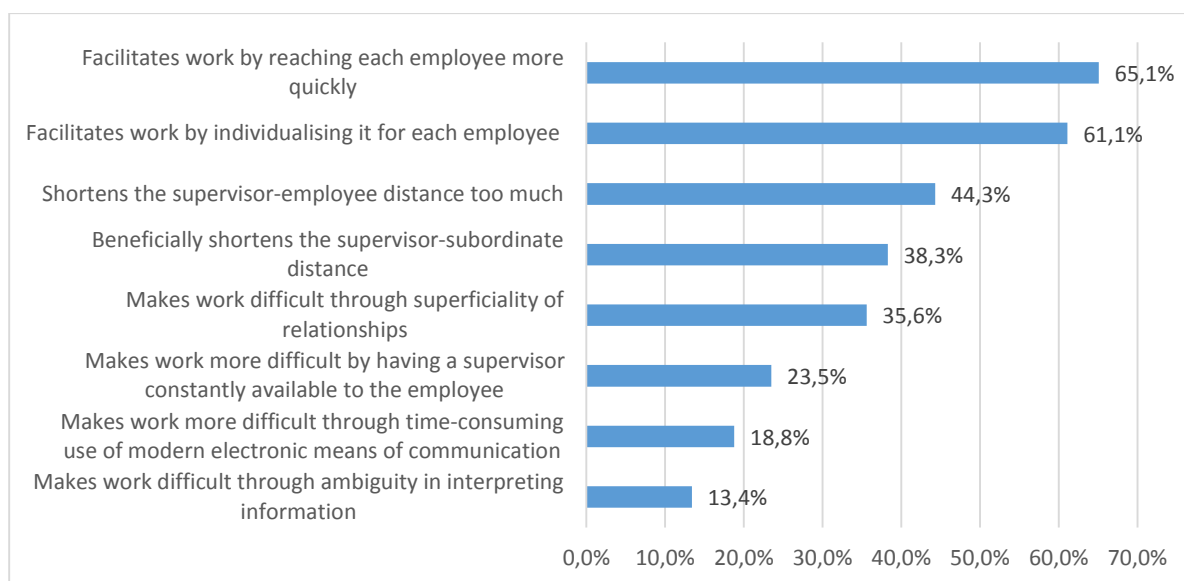


Figure 3. Perceptions, accompanying the evaluation of the manager's work, using modern means of electronic communication with the employee (N = 149).

Source: own elaboration. The results of the survey do not add up to 100%, due to the possibility of the respondent selecting several answers.

Summarising the responses of respondents positively assessing the manager's work using modern electronic communication means, it should be noted that respondents perceive the benefits of this mode of collaboration to a greater extent than the disadvantages, which is in line with the literature and other studies (Moczydłowska, 2021, p. 47). According to the surveyed managers, modern means of electronic communication facilitate work by reaching each employee faster (65.1% of respondents), and by individualising it to the employee (61.1% of respondents). In addition, some believe that this form of communication positively shortens the supervisor-subordinate distance (38.3% of respondents). A slightly larger group of respondents (44.4% of respondents) took the opposite view on the issue of distance in professional relations. They considered that communication by electronic means of communication shortens the superior-subordinate distance too much. Another disadvantage was the superficiality of the relationship (35.6% of respondents), which also hinders work. Some people are disturbed by the constant availability of the supervisor (23.5% of respondents) and the time-consuming use of modern means of electronic communication (18.8% of respondents), which is characteristic of IT-enabled communication. Compared to face-to-face communication, electronic communication often emphasises its impoverishment by non-verbal signals or sparing situational context, which can introduce ambiguity in the interpretation of information. This hindering aspect was highlighted by 13.4% of respondents (Figure 4). The research hypothesis adopted in the article can be partially verified positively. Time-consuming is not the main obstacle to the use of ICT by managers. The more important barrier for managers to use ICT is shortening the distance in relationships between supervisor and employee.

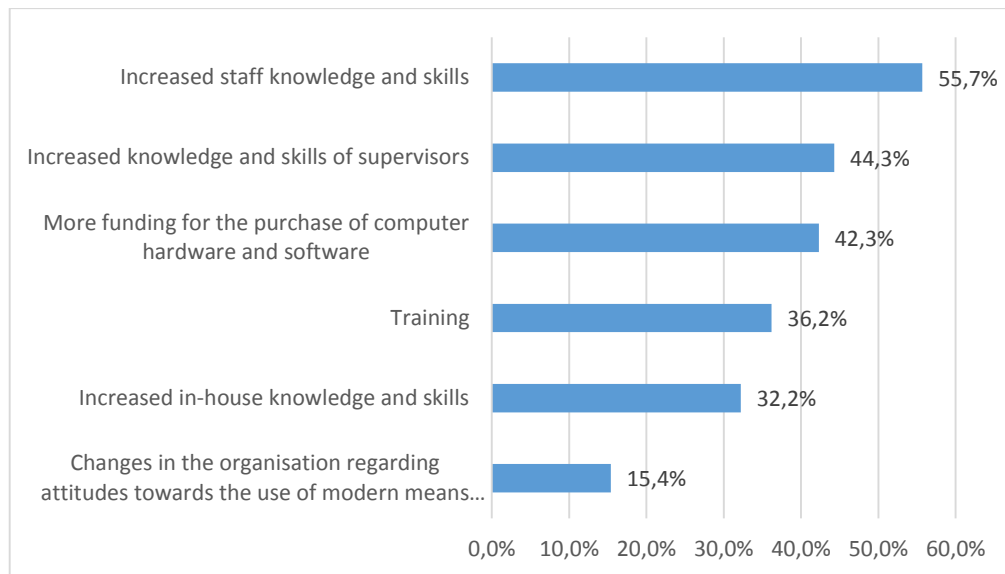


Figure 4. Factors influencing the improvement of the use of modern means of electronic communication in manager's contacts with employees (N = 149).

Source: own study. The results of the survey do not add up to 100%, due to the possibility of the respondent selecting several answers.

The surveyed managers rate their knowledge and skills in the use of modern means of electronic communication at work better, compared to the knowledge and skills of employees and supervisors. In their opinion, a higher level of competence of employees (89 people) and superiors (73 people) would improve the use of IT in carrying out professional tasks. Respondents further mention the need to improve their own competence. Some respondents (67 people) see the problem in insufficient funding for the purchase of computer equipment and software. Other responses highlight the need for training (59 people) to be able to use IT effectively at work. A small proportion of respondents (24 people) indicate the need for a change in attitude towards the use of modern means of electronic communication. This last group of responses raises an extremely important but also extremely difficult factor to change.

4. Summary and conclusions

The digitisation of enterprises is a necessity and a challenge that managers have to face. The literature as well as the results of the available research indicate that managers have little involvement in the process of implementing ICT in the work of the organisation. Despite the fact that managers are aware of the inevitability of ICT use, they follow a conservative approach in their decisions.

The survey shows that managers mostly follow trends and developments in the area of modern technology on a regular basis. On this basis, they decide to use ICT, most often as a complementary/supportive element in their work. The respondents' answers show that few of the surveyed managers use ICT for decision-making and collaboration with employees in remote locations. These results may be surprising given the rise in popularity of remote working and Decision Support System technology (Digital Business Transformation Monitor, 2022, p. 23).

Respondents mainly perceive the benefits of using ICT at work: reaching the employee more quickly, individualising work or the beneficial shortening of the supervisor-subordinate distance. Although this last aspect of working with IT is not viewed positively by all. In implementing IT at work, managers are not bothered by the risk of constant availability, the labour-intensive nature of using IT or the risk of ambiguity in interpreting information.

There is an emerging discrepancy in assessing the degree of digitization of Polish companies. According to the results of the DESI (Digital Economy and Society 2022) survey, Poland, among EU countries, has been ranked one of the last in terms of digitization for years. On the other hand, according to the surveyed managers, the companies they represent have a fairly high level of informatization. The survey questionnaire lacked indicators on the basis of which it would be possible to assess the degree of digitization of the enterprise. The assessment presented by the managers, can be considered subjective, but nevertheless tells us one of the reasons why managers' involvement in the digital transformation of the organization is low. If the level of digitization of the enterprise is rated highly, managers are unlikely to recognize the need for change.

Another dissonance may be puzzling. The surveyed managers mostly see the positives of using ICT, but the research shows (e.g., All Secrets..., 2019) that they are reluctant to implement it intensively in the organization. Perhaps this is related to finances, which were identified in the presented survey as one of the main obstacles to better use of ICT. The first place among the barriers, however, was occupied by human resources.

Managers do not see a problem in the mentality associated with the use of modern technology in the organisation. Likewise, they see little need to improve their skills in using electronic means of electronic communication. However, they draw attention to the low digital competence of employees and supervisors. They believe that more of their knowledge and skills would significantly improve their use of modern means of electronic communication with managers. Such a high evaluation of digital competence of managers is probably due to self-assessment. It would be worthwhile to address the evaluation of managers' digital competences from an employee perspective. However, the best practice for any organisation is to assess the digital competences of the employees it employs in order to make the most of their potential and training. Despite the fact that 55% of the organisations surveyed take technological factors into account in the digitisation of their businesses and in 34% non-technological factors (13 Facts about Digital Transformation 2020, p. 28), it should be emphasised that human resources are one of the main factors determining the success of digital transformation.

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