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LEADER'S DIGITAL COMPETENCE IN MOTIVATING EMPLOYEES DURING THE COVID-19 PANDEMIC – RESEARCH FINDINGS

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Purpose: The purpose of the paper is to illustrate to what extent, during the Covid-19 pandemic, leaders representing enterprises operating in Poland, use IT in motivating employees.
Design/methodology/approach: The paper is based on a literature review, secondary materials in the form of research reports, describing the level of digital competence of Poles, employees and leaders, as well as own research. The results of pre-pandemic research indicate a low level of digital competence of a leader. With reference to this research, the paper presents part of the results of the author's study on digital leadership. Its implementation took place in 2021. 163 companies, located in Poland, participated in it. The study used a diagnostic survey method, the CAWI technique and the author's survey questionnaire.
Findings: The results of the survey indicate that there is a fairly good level of digital competence among leaders, at least in terms of motivation. No correlation is noted between the use of IT in motivating employees with the scope of the company, the form of ownership of the company, the owner's capital, the size of the company and the respondent (manager, IT manager, owner, board member). Only in the case of the degree of computerization of the company does such a correlation appear.
Research limitations/implications: When interpreting the results presented in the paper, it is worth bearing in mind some limitations accompanying the study. The first concerns the difficulty of identifying whether the surveyed managers can be called leaders. The second limitation is related to the use of self-assessment in assessing the digital competence of managers. In this regard, it would be worthwhile to conduct a survey of employees to verify the level of digital competence declared by managers.
Originality/value: The paper deals with the use of IT in motivating employees, an under-identified but important problem, especially during the Covid-19 pandemic. The results of the study can be a guide to what factors to pay attention to when improving the digital competence of the leader and employees.

Keywords: leader, digital leadership, digital competences, motivating, information technology (IT), Covid-19.

Category of the paper: research paper.

1. Introduction

Developments in technology have led to increased attention to digital competencies. They now complement an employee's professional profile and, in the case of some professions, are even the core of it. Studies from before the pandemic, indicate a low level of digital competencies of Poles (Raport badawczy i strategiczny, 2016; Digital Economy and Society, 2018; Śledziewska, Włoch, 2020b), including employers and employees (Śledziewska, Włoch, 2020a, pp. 286-287). Experience and observations show that the crisis caused by the Covid-19 pandemic, has forced IT-enabled work in certain industries and forced the acquisition or development of digital competencies of employees. Managers need to follow these changes if they want to gain respect and authority as a leader.

The purpose of the article is to illustrate to what extent, during the Covid-19 pandemic, leaders representing enterprises operating in Poland, use IT in motivating employees.

The rationale for addressing the topic of digital competence of the leader is that in the literature this problem is discussed insufficiently (Ötting, Masjutin, Maier, 2021) and considered mainly in terms of virtual teams.

2. Literature review

2.1. The need for leader's digital competence in contemporary organizations

The progressive digitization process in various areas of private and professional life, enforces the need for digital competence. They are understood not only as knowledge and skills to use a particular hardware, service or software, treated as a tool. It is also an active attitude that involves readiness to use various services and products (Kierunki rozwoju kompetencji, www.gov.pl). In this definition, we can notice the components of competences (knowledge, skills and attitude), which are described, among others, by G. Bartkowiak (2003, p. 106-107 as cited in Moczydłowska, 2008, p. 28), G. Filipowicz (2004, p. 11), Rostkowski, (2014, p. 42).

In the JRC Research and Strategy Report "DigComp 2.0: Rama Kompetencji Cyfrowych dla Obywateli" (2016), digital competencies are defined as "the skilled and critical use of information and communication technology (ICT) tools." At the same time, it is emphasized that they are necessary to participate in today's society and economy (Raport badawczy i strategiczny, 2016).

The modern leader is expected to fulfill traditional roles but in new contexts, especially resulting from the development of technology and remote working or working in virtual teams. According to respondents to the Global Human Capital Trends 2019 survey, the modern leader differs from the traditional leader primarily by the need to embrace new technologies (75% of

responses), (Leadership for 21st century, p. 38). The results of the study, conducted in 2020 by Deloitte Insights, emphasize even more strongly the need for a leader to appreciate the value of technology (Kark, 2020).

Research conducted prior to the pandemic indicates low digital competency among leaders (Li, 2011; Ready et al., 2020b; Leadership for 21st century). Only 41% of respondents participating in the Global Human Capital Trends 2019 study say the companies they work for are partially or fully capable of meeting the new expectations (Przywódcy XXI wieku, 2020). In the Future of Leadership Global Executive Study and Research Report, 82% of respondents said that in the new economy, "leaders will need digital savvy, but only 10% strongly agreed that their organizations have leaders with the right skills to thrive in the digital economy." (Ready et al., 2020a, pp. 4-5).

Low level of digital competence of leaders should be associated with low level of digital competence of Poles. Statistical data shows that Poland, out of 27 European countries considered in the study, is in 24th place in terms of the advancement of digital processes (Digital Economy and Society Index, 2020). It is emphasized that Polish companies, especially SMEs, do not use the full potential of the digital economy (Digital Economy and Society Index, 2020).

2.2. The leader's role in motivating employees

In publications devoted to leadership one can find various definitions of it (e.g., Fleishman et al. 1991, pp. 245-287; Fairholm, 2002, p. 9; Karaszewski, pp. 25-39). Some authors in the definitions of leadership emphasize the qualities that a leader should have, others point out the processual nature of leadership, emphasizing the ability to influence people. Many authors emphasize the differences between a leader and a manager, emphasizing in the case of a leader mainly the ability to influence others without resorting to coercive measures (e.g. Kożusznik et al., 2020, p. 321-322). In this view, not everyone has a chance to be a leader. Nowadays, it is increasingly emphasized that "a certain level of leadership, applies to all people in the organization, that is, every manager performs leadership functions to a greater or lesser extent" (Korzyński, 2018, p. 11). D. Nelson and J. Quick define leadership in such a way that the terms manager and leader can be used interchangeably without losing their meaning (as cited in Nierenberg, 1998, p. 84; also as cited in Fairholm, 2002, p. 9) According to Abbas and Asgar (2010, p. 9 as cited in Naile, Selesho, 2014, p. 175), successful managers are also successful leaders. The study, the results of which are presented in this article, adopted just such optics. The study was conducted among managers who, by definition, will be described as leaders.

Ladership, according to D. Nelson and J. Quick, is "the process of guiding and directing the behavior of people in the work environment" (Nelson, Quick, 1995, p. 358 as cited in Nierenberg, 1998, p. 84; also as cited in Fairholm, 2002, p. 9). It is characteristic of a leader to be able to motivate, or influence, employees in such a way that they help achieve organizational goals. In addition to this, it is important for a leader to help employees accomplish their own personal and professional goals (Naile, Selesho, 2014, p. 175). The topic of motivation is

present in numerous publications, addressing definitions, theories of motivation or tools to measure it (e.g. Sekuła, 2008; Moczydłowska, 2008; Kopertyńska, 2009).

Less attention is paid to motivation using new technologies. Today, this is an issue that both the employer and the employee must deal with. The transition to remote work, telecommuting and virtual teams have increased the need for interest in the use of IT in motivating. However, it is important to note that knowledge of motivation and the ability to motivate an employee, not just through traditional means, is essential for any leader, including those working in face-to-face relationships. Big data, cloud services, Artificial intelligence (AI), Internet of Things (IoT), communication platforms (e.g. MsTeams), smartphones allow to collect a huge amount of data that can be used in motivating. The main limitation, with this amount of data, is the danger of threatening the privacy of data subjects. (Woźniak, 2020, pp. 330-333). The challenge, on the other hand, is to have the digital competence to skillfully use the technology and the data collected through it.

3. Methodology of the study and characteristics of the research sample

The presented results are a part of research carried out under the research grant "Leadership in the light of determinants of modern intellectual capital management and its impact on national security" carried out at the Military University of Technology (UGB Nr 865/2021). The research was carried out by the method of diagnostic survey with the use of Computer Assisted Web Interview (CAWI) technique and the author's questionnaire. The research was commissioned to the Research Institute IPC Sp. z o.o. The implementation of the study took place in October and November 2021.

The survey was attended by 163 people, representing various companies. Finally, the answers of 149 people were taken into account. One-person companies were excluded from the analysis, as in their case it would be difficult to talk about employee motivation. The selection of companies for the study was stratified randomly and included companies from 16 provinces in Poland.

The survey included individuals representing small businesses with 10 to 49 employees (40 respondents), medium-sized businesses with 50 to 249 employees (59 respondents), and large businesses with more than 250 employees (50 respondents). Responses were provided by IT managers (21 respondents), board members (24 respondents), business owners (26 respondents), and managers (78 respondents). Among the companies participating in the survey, trade was represented by 46 respondents, manufacturing by 49 respondents, and services by 54 respondents. The form of ownership of the company was also taken into account. A partnership was represented by 69 respondents, while a corporation was represented by 80 respondents. In the survey took part companies with predominance or exclusive Polish

capital (122) and predominance or exclusive foreign capital (27). The respondents were also asked about the degree of computerization of the company. No or low level of computerization was declared by 5 respondents. Medium level of computerization was indicated by 56 respondents, high level by 63 respondents and very high or total level by 25 respondents. Calculations were conducted using PS IMAGO PRO 6.0 program.

The research material presented in this paper is an excerpt from the study and the basis for answering the research question: To what extent do the surveyed leaders use information technology (IT[1]) in motivating employees? The answer to this question will determine the level of digital competence of the surveyed leaders in motivating. The survey questions were formulated in such a way as to take advantage of the respondents' declarations regarding the skills component of digital competence, assuming that it must be accompanied by knowledge and attitudes related to the creative use of IT in management.

Based on the analysis of the literature and results from research reports available online, the following research hypotheses were accepted: H1. The level of digital competence of the surveyed leaders in motivating employees is at a low level and H2. The use of IT in motivating employees depends on company attributes such as size, nature of business, form of ownership, ownership capital, degree of computerization of the company and whether the respondent is an IT manager.

4. Results of the study

In one question, respondents were asked to indicate the extent to which they use modern information technology (IT) in their leadership practices, given in the multiple choice question (cafeteria). The prompt for the question presented examples of IT (electronic workflow systems, social media platforms, mobile applications, instant messaging). The question was closed-ended and used a scale from 0 to 5, with 0 indicating no use and 5 indicating the highest degree of IT use in the leader's practice. A value of 3 on the five-point scale is interpreted as an average degree of IT use in a leader's practice. Among the practices listed in the multiple choice question was motivation in general. Because motivation is a multidimensional process, it would be difficult to discuss all of its components. Due to the accepted definition of leadership (Naile, Selesho, 2014), the article decided to present the results of the study on setting individual goals for employees from their own team, setting team goals through discussion, and learning about the employee's needs, aspirations, and development perspective. These activities were included

[1] Information Technology (IT) and also Information and Communication Technology (ICT) "Broadly defined, IT is a set of specific means (distinguishing hardware and devices such as computers or computer networks) and tools (software-software) as well as technologies (e.g. telecommunications). Thus, it encompasses in its scope both computing and communications". Information Technology – Encyklopedia Zarządzania (mfiles.pl).

in the multiple choice question in which motivation was included, so the way of interpreting the results will be identical. When asked about the use of IT in motivating employees, 56.4% of the respondents declared that they use these means to a high or very high extent (41.6% marked 4 and 14.8% marked 5) (Figure 1). However, a smaller group (43.6% of respondents) indicated the value of 3 and below.

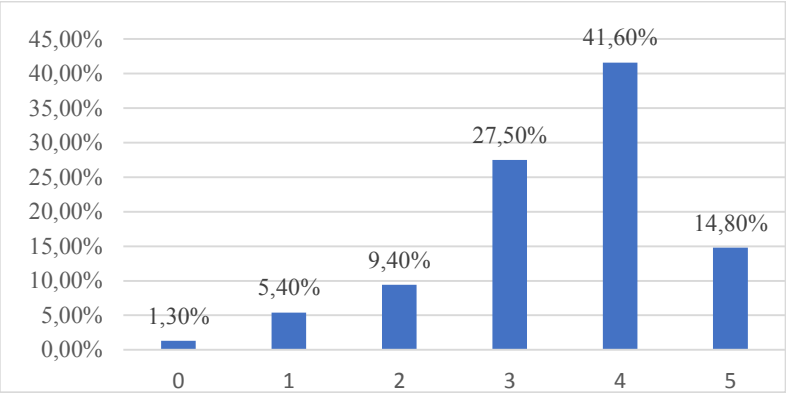

Figure 1. Using IT to motivate employees (N = 149). Source: own research.

Spearman's R correlation coefficient (Rs = 0.192) indicates a low but clear and statistically significant (p = 0.019) correlation of the use of IT in motivating employees with the degree of computerization of the company.

The definition of leader cited earlier after Naile and Selesho (2014) exposes the ability to motivate others so that they achieve the organization's goals but also their own. Respondents were asked about using IT to set individual goals for employees on their own team and to set team goals through discussion (Figure 2).

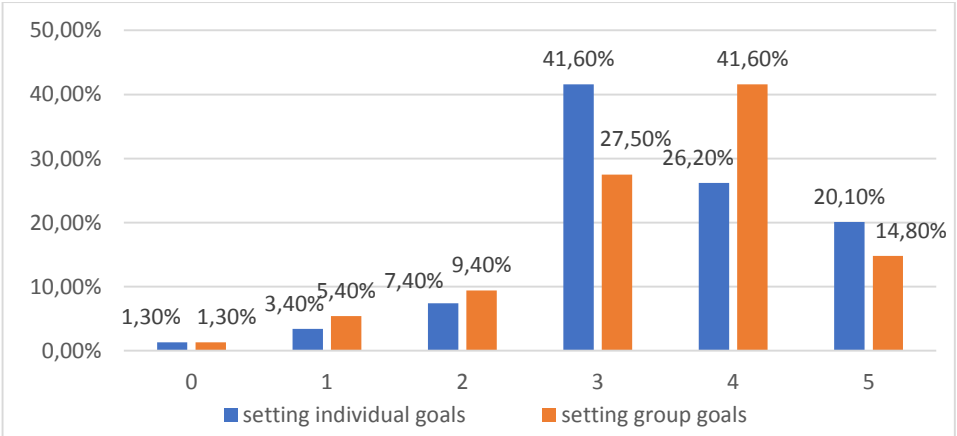

Figure 2. Set individual goals for employees on your team and team goals through discussion using IT (N = 149). Source: own research.

Summing up the responses of the respondents who marked the value 4 and 5 on a five-point scale, we can state that IT is used with slightly greater intensity by the leader in setting team goals (56.4%) than in setting individual goals for employees from his/her own team (46.3%). However, it is worth noting that the use of IT for setting individual goals for employees is fairly

evenly distributed (value 4 on the scale was marked by 26.2% of respondents and value 5 was marked by 20.1% of respondents). The use of IT for setting team goals in discussions is more often used by respondents at a high level (41.6% of respondents marked a 4 on the scale) than at a very high level (14.8% of respondents marked a 5 on the scale). In both of these practices, leaders are eager to take advantage of IT opportunities, but there is a sizable group of respondents who use IT mediocre or below. In case of setting individual goals for employees from own team, 53.7% of respondents (41.6% of which use IT at medium level), and in case of setting team goals through discussion, 43.6% (27.5% of which use IT at medium level).

Spearman's R correlation coefficient (Rs = 0.231) indicates a low, but clear and significant (p = 0.005) correlation of the use of IT in setting individual goals for employees from their own team with the degree of computerization of the company. A similar correlation (Rs = 0.247) low but clear and significant (p = 0.002), appears for the use of IT in setting team goals through discussion with the degree of computerization of the company.

Motivation is more effective the better the supervisor knows the employee's needs, aspirations, and growth prospects. IT increases the possibility of getting to know the employee. Statements posted on Internet forums, entries and photos published on social networking platforms are a valuable source of knowledge about what is important for the employee. Through them you can obtain information about which it would be difficult to ask the employee, such as family, leisure activities or interests. These aspects of IT use become more important in the case of limited face-to-face contacts.

The respondents were asked to what extent they use IT in order to learn about the employee's needs, aspirations and development prospects (Figure 3).

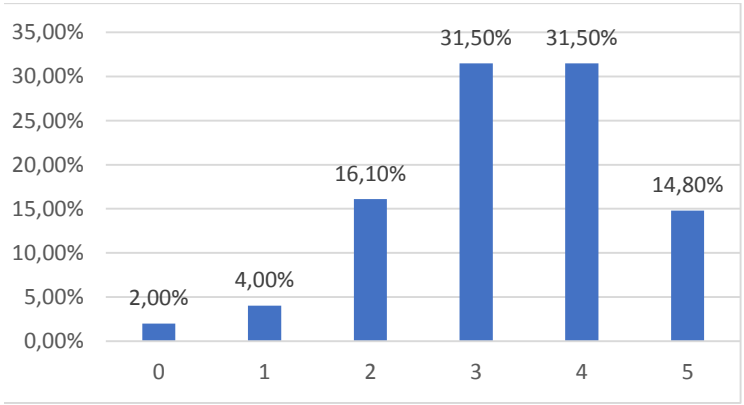

Figure 3. Getting to know the employee's needs, aspirations and development prospects using IT (N = 149). Source: own research.

If we take the value of 3 as using IT to an average extent, then 31.5% of respondents use the potential of IT in getting to know employees to such an extent. The same group (31.5%) uses IT as a source of knowledge about the employee to a high extent. The same group (14.8%), declares using IT to the maximum extent in order to get to know the employee's needs, aspirations and development prospects. A similar group (16.1%) decides to use it for the mentioned purpose to a small extent. It can be assumed that there are two groups. The first

group uses IT to learn about the employee's needs, aspirations and development prospects to a higher than average extent (46.3%), the second group uses IT to a medium and lower extent (53.6%).

Spearman's correlation coefficient R (Rs = 0.245) indicates a low but clear and significant (p = 0.003) correlation of IT use in learning about employee needs, aspirations and development prospects with the degree of computerization of the company.

In all described cases, no correlation is observed between the use of IT in motivating employees with the scope of activity of the company, the form of company ownership, the owner's capital, the size of the company and the respondent (manager, IT manager, owner, board member). Only in the case of the degree of computerization of the company such a correlation appears. Therefore, H.2 can only be partially positively verified.

The results of the research do not show a clear predominance of those who reach for IT in the mentioned leadership practices to a degree above the average level. However, H.1 stating that the level of digital competence of the surveyed leaders in motivating employees is at a low level cannot be considered true, as the responses of the respondents that indicated a level above average ranged from 46.3% to 56.4% in all categories discussed in the article.

5. Summary and conclusions

The survey results do not show a clear advantage for leaders who reach for IT to a high and very high degree to motivate employees. However, one can speak of a fairly good level of digital competence among leaders, at least in terms of motivation. Such results are cause for optimism, given the pre-pandemic survey results. However, there is still a great need for education in the field of digital competence of the leader. In interpreting the results, it is also worth bearing in mind some limitations that accompanied the study:

1. Self-assessment of leaders. Other assessments could be provided by employees to whom the leader uses modern IT technologies. In addition, asking about the ability to use specific IT tools could also bias the survey results.
2. Recognition of the complementary roles of manager and leader. Due to the difficulty in identifying whether the surveyed managers can be called leaders, the perspective present in the literature was adopted, indicating the complementarity of the roles of manager and leader.

One of the groups participating in the study were IT managers, who by definition have a broad knowledge of the use of modern technologies. However, it was assumed, following B. Oberer, A. Erkollar (2018), that managers employed in industries that are explicitly associated with the need for technical or IT skills do not necessarily use this knowledge in

leadership activities. The results of the survey presented here also do not indicate that IT managers use IT in motivation more than other respondents.

Surprisingly, of the company attributes listed, only the degree to which the company is computerized affects the use of IT in motivation. This is an indication of what to look for when improving a leader's digital competence.

Considering the leaders' self-assessment on the use of IT in motivation, it can be concluded that the Covid-19 pandemic has contributed to the digital competence of leaders. In the text, the Harvard referencing citation style should be used (Smith, 2017) or (Smith, Bradley, 2017). In the case of more than three authors, write the surname of the first of them and add the abbreviation “et al.” (Bradley et al., 2017).

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