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FACTORS AFFECTING THE PERCEPTION OF AN ELECTRONIC PERFORMANCE MONITORING SYSTEM IN ACTION

As technology continues to change, electronic monitoring of work performance is experiencing another wave of interest from businesses and scientists. Based on the opinions of 100 warehouse employees, whose work is monitored using electronic tools, it was shown that the perceived impact of monitoring on increasing effectiveness and positive evaluation of the workplace are the best predictors for reducing dissatisfaction with monitoring, while the emotional cost and quality of one's work do not affect this dissatisfaction. It was also shown that evaluation of the workplace is related to employees' use of the opportunities offered by the monitoring tool, i.e., the use of help from superiors via monitoring. Several practical recommendations and directions for further research were formulated.

Keywords: work monitoring, EPMS, acceptability, warehouse monitoring.

1. INTRODUCTION

The use of work monitoring tools is experiencing another wave of interest from business and scientists. Although work monitoring is a standard managerial activity, successive waves of innovation in the field of information and communication technology (ICT) cause not only the emergence of new ways of implementing monitoring activities, but also a sharp increase in the interest of practitioners and researchers in the issues of work monitoring (Stanton, 2000; Backhaus, 2019; Thiel et al. 2019; Ravid et al., 2020; 2023; Woźniak, 2021). An additional impulse for the interest in work monitoring with the use of technological tools was created by the pandemic, during which the necessity of remote work not only made the physical dispersion of work teams widespread, but also provided an incentive to look for new solutions in the field of monitoring. The benefits that both employers and employees have noticed in remote work have meant that even after the pandemic, hybrid work remains a fairly common way of organizing workstations, which as a result forces the use of various remote methods of monitoring.

Scientific research into the next wave of work-monitoring technologies yields fairly consistent results, showing workers' concerns about having their work being monitored by

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technological solutions (Stanton, 2000; Backhaus, 2019; Ravid et al., 2020; 2023), as well as benefits for productivity of such monitoring (Goomas, Ludwig, 2009; Backhaus, 2019; Thiel et al., 2019). However, these results are often based on laboratory experiments and opinions of people formulated in hypothetical situations. Hence, the literature repeatedly emphasizes the need to research the opinions of people who already have experience with work monitored with new monitoring solutions, so that scientific findings can become the basis for well-established practical recommendations.

The aim of this text is to analyze the perception of the ICT-based work monitoring of warehouse workers, implemented by the organization six months earlier. The opinions of 100 warehouse workers were analyzed to check which characteristics of people favor a more positive attitude towards work monitoring with the use of technological tools. It was found that positive evaluation of the workplace and perceived impact of monitoring on increasing effectiveness are better predictors of attitude towards monitoring, than self-assessment of work quality and monitoring-related emotional cost.

The article is organized as follows. The first part presents the issues of monitoring and its new possibilities resulting from the development of ICT technology. It also indicates a few key questions for understanding the conditions of employees' perception of modern work monitoring systems. Part 2 presents the research methodology, and the third – its results. The text ends with a discussion of results, and conclusions with practical advices and indications for further research. Main body – only texts written in English will be accepted: font size 10, indent of the first line 0.5 cm, justified, single line spacing, space before and after paragraph size 0. Please do not insert additional lines between the paragraphs.

2. ELECTRONIC MONITORING OF WORK AND ITS PERCEPTION BY EMPLOYEES

Work monitoring is generally understood as “the observation, examination, and/or recording of employee work-related behaviors, with and without technological assistance” (Stanton 2000; Thiel et al., 2019). This understanding separates monitoring from the further use of the collected data, and thus in particular from the assessment of work, which is based on the analysis of data collected by monitoring. Work monitoring is usually placed in performance management, as it provides data for managerial decisions as to whether and which interventions are worth implementing to ensure proper performance by the monitored employee. Monitoring data – part of which is a record of behaviors and part, the results of actions that were carried out through these behaviors – has always served managers as a basis for recognizing signals of situations requiring their intervention. In addition, the very fact that the work is monitored was supposed to encourage workers to perform with greater care, by emphasizing the importance of the tasks as well as the possible consequences of the supervisor's intervention.

Traditionally, work monitoring was a managerial task, which, due to the need to devote time to observing behavior, was carried out incidentally and in short periods of time. Most often, instead of observing work, managers drew conclusions about its correctness on the basis of monitoring its results. The transfer of some tasks to the sphere of ICT enabled the use of these technologies to automate some work monitoring tasks, and subsequent waves of ICT-based solutions in the field extended this type of monitoring to new industries and types of work.

Since the 1980s, monitoring has been widely used in call center work management (Holman, 2003), and the development of GPS enabled the use of monitoring technology in (mainly truck) transportation at the beginning of the 21st century (Woźniak, 2020). The dissemination of cheap RFID technology (Radio-Frequency Identification) allowed for the spread of work monitoring in logistics and warehousing (Woźniak, 2021; 2023). In the latter, electronic monitoring systems are currently a commonly used standard in work supervision (Goomas, Ludwig, 2009; Kantor, Streitfeld, 2015; Woźniak, 2023), although it is expected that the dissemination of the Internet of Things will cause another breakthrough.

The Internet of Things, and the possibility of transferring information between all objects (including people) at all times and to all places (Lu et al., 2018), should effect in the next wave of types of electronic performance monitoring systems (EPMS). This new wave will be based on so called smart monitoring tools which will be used not only for collecting data, but also for analyzing it on an ongoing basis and for implementing appropriate corrective actions immediately, without the need for the supervisor to act (Woźniak 2023). The dissemination of such solutions in the practice of enterprises will radically expand the application and scope of monitoring, hence the need for research on the determinants of how technical solutions in this area are perceived by employees of industries that have experience with previous generations of work monitoring tools, e.g. warehouse workers. This issue has already been recognized in the world scientific literature, e.g. (Backhaus, 2019; Ravid et al., 2020).

The need for research on people with experience in using a given technology results from the expected differences between two different types of opinions that potential users may have toward innovative technological devices, i.e. acceptance and acceptability (Alexandre et al., 2018; van Acker et al., 2020).

> Acceptability is an a priori phenomenon in the time scale of our confrontation with a tool, and it predicts intent to use... [while] Acceptance is defined as an a posteriori pragmatic evaluation, implying that a real activity is required from the user prior acceptance evaluation (Alexandre et al., 2018).

These two measures of emotional and cognitive attitudes toward new tools are opinions formulated at two different points in time – before experiencing a tool and after. Therefore the first is an opinion expressed by someone without personal experience with the tool, who bases their views on imagined (stereotypical) features of the tool and the consequences of its use. The second type of opinion is based on the actual experience of the person who formulates it. It is obvious that these opinions could be conditioned in a different way. The first one can be explained by the Technology Acceptance Model (TAM) (Davis et al., 1989; Davis, 1989) with later extensions (Venkatesh, Bala, 2008; Venkatesh et al., 2016), but the second one is based primarily on the evaluation of previous use and should better predict actual subsequent use than intention-related opinions created as measures of acceptability. This difference has been already identified by research on e-learning (Woźniak, 2009). However research on electronic monitoring did not until very recently distinguish between the above two ways of forming an opinion (van Acker et al., 2020).

Theoretical explanations of the formation of employees' opinions about being monitored by EPMS usually refer to theories describing the formation of attitudes towards new technologies arising from models of reasonable action (Fishbain, Aizen, 1975; Ajzen, 1991), such as the aforementioned versions of TAM or theory of perceived risky decision

taking (Bauer, 1960). They show that the monitored person's opinion about being monitored is based on perceived risks, losses and benefits associated with being monitored. Losses include various current emotional costs, such as threat to privacy or psychophysical stress; real adverse consequences; and lastly ones that appear when the assessment of behavior and work results is negative. Additionally, in theories based on TAM, the difficulty of using a given tool (the monitoring) is also a cost, and this impacts the intention to use the tool. Benefits include, among others, possible help from the monitor and indirect impact on the positive assessment of the effects of work and its consequences. It is obvious that assessments of the probability of each of these losses and benefits are subjective and dependent on various individual characteristics, hence different people may have a different assessment of the same technological and management system, which is a specific EPMS. We expect the variable modifying this attitude to be trust in the company and the monitoring supervisor (Stanton, 2000; Alge, Hansen, 2014). This variable affects not only how the risk of consequences unfavorable for the individual in the event of a wrong action are perceived, but it also affects how convinced the individual is that the actions of persons installing monitoring systems are reasonable.

As has already been mentioned, these theories explain the opinions people form about monitoring ex ante, before a monitoring system is put into practice. Research on the feelings of employees who are already subject to EPMS in a standardized manner was conducted primarily on call center employees (Backhaus, 2019; Ravid et al., 2020), where monitoring using EPMS became the earliest management standard (Holman, 2003). Even there, not current behavior but performance indicators (results of actions) were primarily monitored, because – although the systems collected this information – data analysis required a lot of time from managers, hence it was carried out occasionally (usually – randomly for a while and not more often than once a week – Holman, 2003; Holman et al., 2009; Woźniak, 2023). Scientific research on these practices has yielded results that are only partially in line with expectations (Ball, 2010; 2021). Indeed, according to Zajonc's theory of social facilitation (1965; 1980), work monitoring promotes higher efficiency for standard (easy) tasks (Backhaus, 2019), but also higher stress during its performance (Thompson et al., 2009; Ravid et al., 2023) – according to the theory of arousal caused by the presence of others (Baron, 1986). However, call centers' employees' opinions on monitoring tend to be divergent (Holman, 2003), and trust in the company and the manager (Alder et al., 2006) and positive evaluation of the workplace foster positive opinions on monitoring (McNall, Roch, 2009).

Explanations for these discrepancies in research may be various, and one of them may be the phenomenon of habituation (cf. Stanton and Sarkar-Barney, 2003). When work is constantly monitored, and so perceived risks and subjective assessments of the threat of consequences are verified, EPMS ceases to be a new technology and becomes an ordinary management tool. For its assessment, various imagined and potentially occurring risks cease to be relevant, and only past experience of being monitored with such a tool becomes significant. No scientific studies on monitoring directly address this thesis. However, this fact has been well known for many years in a similar situation, i.e. attitudes to e-learning. The attitude of respondents to e-learning ex ante is well explained by the TAM model and its variants, but the attitude towards e-learning, when the learner already has their own experience in using these technologies, is mainly influenced by the assessment of past experience (cf. literature review in Woźniak, 2009). The premise for establishing this mechanism also in the area of work monitoring can be confirmed by numerous studies showing the importance of trust in shaping employees' reactions to monitoring (Alder et

al., 2006; McNall, Roch, 2009; cf. Ball, 2010; 2021). Bad experiences with the consequences of being monitored should be reflected most quickly in a decrease in trust in the company, hence it can be considered that our hypothesis is also supported by previous EPMS research.

A positive experience of being monitored can effect in different results that have a feedback effect on increasing positive assessment of monitoring. Firstly, people whose work is of a high quality should experience positive reactions from supervisors observing their work, and at the very least – should not experience negative ones. This suggests they will be more in favor of being monitored, and there will be a greater chance of habituation and a lower emotional cost of monitoring.

It should also be expected that people who see the benefits of monitoring for increasing their work efficiency, or who use the monitoring tool to obtain help from the manager in difficult situations (a monitoring scanner in the company we surveyed enables direct visual contact with the manager), will better evaluate the monitoring, either directly or thanks to good past monitoring experience. Therefore, the following factors will have a positive impact on attitude towards monitoring: positive evaluation of the workplace, taking advantage of opportunities to get help from the manager via monitoring tools, perceived impact of monitoring on increasing effectiveness, and self-assessment of one's work quality.

However, it should be remembered that the monitoring situation evokes reactions conditioned also by certain individual factors (Stanton, 2000; Alder et al., 2008; Ravid et al., 2023). Regardless of fears related to the consequences of the observation results, the strength of emotional tension related to being observed depends on individual characteristics. It is conditioned by individual sensitivity to such action, but also vulnerability to privacy violations. It can therefore be assumed that this individually conditioned emotional cost will be a factor independently influencing reactions related to monitoring, as it is conditioned more by individual characteristics than by the work situation.

This allows the formulation of the following hypotheses:

Hypothesis 1: Evaluation of the workplace is higher among respondents who declare that they are monitoring-habituated.

Hypothesis 2: Evaluation of the workplace is higher among respondents using help from the manager via monitoring.

Hypothesis 3: The predictors of reducing dissatisfaction with monitoring are: evaluation of the workplace, perceived impact of monitoring on increasing effectiveness, and higher than average self-assessment of work quality, while its increase is influenced by emotional cost.

3. METHOD

3.1. Participants

The sample consisted of 100 employees of a large international logistic company in its logistic center near Warsaw (c. 75% of all workers from this logistic warehouse). The center is one from 150 branches of the 10 000 employees' company (other centers are located in 13 EU countries). The data was collected by E. Kluczek, MA student of one of the authors and administrative employee of the center, who kindly added the authors' questions to her e-questionnaire in May 2022. A summary of the subjects' demographics is given in Table 1.

Table 1. Sample table and caption (font size 9, hanging indent 0.5 cm, space before paragraph size 6, space after paragraph size 3)

Characteristics	N=100	Percentage
Age		
18–30	38	38.0
31–45	34	34.0
46–60	18	18.0
more than 60	10	10.0
Length of professional experience in the company		
less than 3	11	11.0
3–5	34	34.0
6–10	21	21.0
11–20	23	23.0
more than 20	11	11.0
Position		
warehouseman	49	49.0
senior warehouseman	50	50.0
no answer	1	1.0
Work productivity (% of factory standard)		
less than 80%	14	14.0
81–120%	63	63.0
more than 120%	23	23.0

Source: own research.

3.2. Measures

Habituation was measured by a resolution (single choice) question: *Do you work differently knowing that your work is being monitored?* The respondents chose one of two answers: 1. *Yes, knowing that I am being monitored, I try to do my job accurately*. 2. *No, I don't usually pay attention to monitoring*. Respondents who chose answer 2 (51%) were considered to be monitoring-habituated.

Emotional cost was measured using three items: *Being aware that my work is monitored, I feel more stress in my daily work; Knowing that my work is monitored, I do not feel comfortable and at ease; I feel followed by my employer in every activity*. Participants responded on a five-point Likert-type scale (from 1 – strongly disagree to 5 – strongly agree). The factor analysis extracted one component with no items being discarded. (KMO=0.69; the Bartlett test of sphericity: $\chi 2 = 90.77$, df=3, $p<0.001$; 70.64% of variance explained). Loadings ranged from 0.80 to 0.88; Cronbach's alpha=0.79.

Dissatisfaction with monitoring was a dichotomous variable with a value of 1 if participants answered negatively (67%) to the question about their satisfaction with monitoring their work, and 0 if they answered positively or were undecided.

Self-assessment of work quality was a dichotomous variable with a value of 1 if participants rated their work quality higher than average (66%) and 0 otherwise.

Perceived impact of monitoring on increasing effectiveness was measured using four items: *Thanks to monitoring, the work is done conscientiously; Thanks to monitoring, I started to pay more attention to the length of my breaks at work; Being aware of the fact that my work is monitored, I apply myself more diligently to its performance; Thanks to the*

fact that I am aware that my work is monitored, I try to work faster. Participants responded on a five-point Likert-type scale (from 1 – strongly disagree to 5 – strongly agree). The factor analysis extracted one component with no items being discarded (KMO=0.72; the Bartlett test of sphericity: $\chi 2$ =102.43, df=6, p<0.001; 58.59% of variance explained). Loadings ranged from 0.69 to 0.85; Cronbach's alpha=0.76.

Help from the manager via monitoring is a dichotomous variable dividing the respondents into using the help of their superiors via monitoring (78%) and not using such help (22%).

Evaluation of the workplace was measured using seven items: *I would like to work in this company until I retire; This company is a good place to work; This company gives me the opportunity to develop professionally and learn; This company gives me the opportunity to plan my professional career in the long term; My manager is better than average; Earnings in this company are not worse than elsewhere; This job does not interfere with private life*. Participants responded on a five-point Likert-type scale (from 1 – strongly disagree to 5 – strongly agree). The factor analysis extracted one component with no items being discarded. (KMO=0.87; the Bartlett test of sphericity: $\chi 2$ = 350.92, df=21, p<0.001; 60.09% of variance explained). Loadings ranged from 0.69 to 0.89; Cronbach's alpha=0.89.

All statistical analyses were completed using IBM SPSS Statistic software (v. 28). Statistical significance was set at the 0.05 level.

3.3. Results

Table 2 presents the means, standard deviations, and correlations among the variables used in this study.

Table 2. Means, standard deviations, and correlations

Measure	M	SD	Correlations					
			1	2	3	4	5	6
1. Dissatisfaction with monitoring	0.67	0.47						
2. Habituation	0.51	0.50	-0.18					
3. Emotional cost	3.07	1.26	-0.11	0.10				
4. Self-assessment of work quality	0.66	0.48	-0.10	0.06	0.08			
5. Perceived impact of monitoring on increasing effectiveness	2.97	1.16	-0.37**	0.06	0.46**	-0.03		
6. Help from the manager via monitoring	0.22	0.42	-0.04	-0.11	-0.06	0.18	-0.20*	
7. Evaluation of the workplace	3.13	1.08	-0.34**	0.09	0.11	0.18	0.48**	-0.19

Notes: **Correlation significant at the 0.01 level.* Correlation significant at the 0.05 level.

Source: own research.

In order to verify hypotheses 1 and 2 two independent samples t-tests were performed (Table 3). There is no significant difference in means of evaluation of the workplace measure between monitoring-habituated and not habituated subjects. Thus, hypothesis 1 is rejected. Evaluation of the workplace is significantly higher in the group that uses help from the manager via monitoring, which confirms hypothesis 2.

Table 3. Evaluation of the workplace in categories and comparisons of means scores

Independent variable	Categories	n	M	SD	t-test for equality of means	p (one-sided)	Cohen's d
Habituation	Yes	51	3.20	1.10	$t_{(98)} = 0.868$	0.194	
	No	49	2.99	1.20			
Help from the manager via monitoring	Yes	78	3.21	1.15	$t_{(98)} = 1.930$	0.028	0.48 (moderate)
	No	22	2.68	1.04			

Source: own research.

To investigate factors affecting dissatisfaction with monitoring binary logistic multivariate regression analysis was performed. Due to weak correlation between dissatisfaction with monitoring and self-assessment of work quality and emotional cost (Table 2), the model was specified as follows: dependent variable: dissatisfaction with monitoring; predictors: perceived impact of monitoring on increasing effectiveness, and evaluation of the workplace.

The Hosmer and Lemeshow test is not statistically significant ($\chi^2(8)=7.085$, $p=0.527$), which means that the model met the goodness of fit criterion. The regression results (Tab. 4) show that both perceived impact of monitoring on increasing effectiveness and evaluation of the workplace are significant (and, in line with the hypothesis 3, negative) predictors of the probability of dissatisfaction with monitoring.

Table 4. Logistic regression results

	B	S.E.	Wald	df	Sig.	Exp(B)	95% C.I. for Exp(B)	
							Lower	Upper
Perceived impact of monitoring on increasing effectiveness	-0.559	0.235	5.661	1	0.017	0.572	0.361	0.906
Evaluation of the workplace	-0.480	0.240	4.010	1	0.045	0.619	0.387	0.990
Constant	40.014	0.931	18.579	1	<0.001	55.382		

Source: own research.

The tolerance and the variation inflation factor values (resp. 0.766 and 1.305) do not suggest problems with multicollinearity among predictors. Nagelkerke's R2=0.234 which means that the model explains about 23% of the variation. The odds ratio for perceived impact of monitoring on increasing effectiveness indicates that each increase on this

predictor scale leads to a 100%*(0.572-1)=-42.9% change in the odds of dissatisfaction with monitoring i.e. to its decrease. In the case of evaluation of the workplace this change is 100%*(0.619-1)=-38.1%.

The third hypothesis was therefore only partially confirmed. Out of the hypothetical four predictors, only two significantly and expectedly negatively affect dissatisfaction with monitoring.

4. DISCUSSION OF THE RESULTS

Contrary to expectations, the hypothesis about the relationship between habituation and evaluation of the workplace was not confirmed by the collected data. There may be several reasons for this result. First, the habituation variable used in the study is based on a dichotomous declaration, so people who may not have been sure of their level of habituation were incidentally classified as a result of forced distribution. However, habituation – whether short-term or long-term, which we used in our study – is a phenomenon that is not fully conscious (Groves, Thompson, 1970; Rankin et al., 2009). It could therefore be expected that a part of the respondents did not have a well-established opinion on this issue and were incorrectly classified. Secondly, since habituation is poorly conscious, it is difficult to precisely measure it with direct questions, regardless of how they are formulated. It is usually measured by reaction time to a repetitive stimulus, but research on habituation is ongoing and discusses several different mechanisms of its formation that suggest different ways of measuring it (Rankin et al., 2009; Colwil et al., 2023; Turatto, 2023). Third, the relationship between evaluation of the workplace and habituation is probably not direct. The current theories of habituation, treating it rather as a cognitive phenomenon (Colwil et al., 2023; Turatto, 2023), suggest that the lack of fear may be conducive to habituation. However, one could expect an emotional component to mediate this relationship. Nevertheless, habituation according to our measure does not differentiate the subjects in terms of emotional cost ($t_{(98)}$= 0.994; p = 0.161).

Hypothesis 2 was confirmed. Those using help from the manager via monitoring are characterized by a higher assessment of their workplace. Regardless of whether the use of help via monitoring is a symptom of a positive assessment of the workplace or is influenced by other factors, this suggests beneficial effects of positive evaluation of the workplace for monitoring effectiveness measured by productivity. The benefit of monitoring is not only the possibility of supervising work, but also quick intervention when an employee needs help during work. As long as EPMSs are not smart (so they do not independently analyze the content they collect), the signal from the employee is the best sign that such help from the manager is needed.

Examination of the third hypothesis showed that dissatisfaction with monitoring is significantly reduced by two factors: the perceived impact of monitoring on increasing effectiveness and evaluation of the workplace. What should arouse attention is the lack of importance of the affective variable, i.e. emotional cost, as well as the variable characterizing an individual, i.e. perceived ones work quality. This seems to prove that when monitoring becomes a standard tool in the work environment, the attitude towards monitoring is shaped by the very fact that it is possible to use its usefulness for the effects of work (i.e. the way of designing the monitoring system and the functionalities it contains) and the general attitude towards the company. If this fact were confirmed by further research, it would show that for the acceptance of the change (that is the introduction of EPMS), the key factor is whether the new tool brings benefits for employees' work

effectiveness, and not an emotional reaction to being watched. This result is consistent with the general idea of habituation as a decline in the importance of an emotional stimulus long-term present in the work environment, as well as with previous results of monitoring studies that showed that employees relate more favorably to ESMP when they see in it benefits for themselves (Ravid et al., 2020).

The second significant predictor of reducing dissatisfaction with monitoring is evaluation of the workplace. It suggests the hypothesis that positive evaluation of the workplace may be a factor that limits employees' fears and their emotional reactions related to being monitored. What is a challenge for the conclusions formulated in the research reviews regarding the criteria for the emergence of negative employee reactions to monitoring (Ravid et al. 2020; 2023) is the lack of a significant impact on dissatisfaction with monitoring of emotional costs. Ravid and colleagues (2020) proposed a typology of EPMS in which monitoring characteristics – the purpose, invasiveness, synchronicity, and transparency of the monitoring – interact to affect individual-level work outcomes. Our study, although it showed the importance of the monitoring objective (whose indicator was observing the benefits of monitoring for increasing work effectiveness), did not show the importance of invasiveness (which in our study corresponded to the measurement of the emotional burden of monitoring).

Our data do not allow us to discuss neither the aspects of synchronicity, nor transparency, because the specific EPMS that was implemented in the surveyed company had relatively identical characteristics due to these criteria between employees. However, the importance of trust in the company as a good workplace, i.e. evaluation of the workplace, for reducing dissatisfaction with monitoring, seems to show that general trust in the subject introducing the change is more important for the perception of EPMS than the nuisances caused by this system, e.g. stress. This result is important in the sense that ESMP research emphasizes that "organizations that monitor more transparently and less invasively can expect more positive attitudes from workers" (Ravid et al., 2023). Our study showed that trust is a better predictor of attitudes towards long-term monitoring than perceived emotional costs. It also showed lack of significant correlations between emotional cost and using help from the manager via monitoring, nor perceived impact of monitoring on increasing effectiveness. It can therefore be assumed that the results of the meta-analysis (Ravid et al., 2023), were based more on laboratory studies and ex-ante opinions than on research of functioning work monitoring systems. This is confirmed by the proportions of data sources for this meta-analysis (see: Table 6 in Ravid et al., 2023).

5. CONCLUSIONS

Work monitoring tools are experiencing another wave of interest from business and scientists. One of the causes is that with the spread of monitoring related to the Internet of Things, the use of smart tools will spread and be used not only for collecting data, but also for analyzing it on an ongoing basis and for implementing appropriate corrective actions (Woźniak, 2023). However, research results are still dominated by data on acceptability rather than acceptance of (traditional) electronic performance monitoring systems, hence conclusions drawn may be misleading for management practice.

The purpose of this text was to analyze the perception of a specific implementation of tools for monitoring the work of warehouse employees in a chosen logistics company. Based on the opinions of 100 warehouse employees, perceived impact of monitoring on increasing effectiveness and positive evaluation of the workplace were shown to be the

best predictors for reducing dissatisfaction with monitoring, while the emotional cost and quality of one's work did not affect this dissatisfaction. It was also shown that evaluation of the workplace is related to the use by employees of the opportunities offered by the monitoring tool, i.e. the use of help from superiors via monitoring.

The results of the study suggest that also in the field of acceptance of electronic work monitoring systems, the conditions for acceptability and acceptance are different, which means that further research on acceptance is necessary so that science can formulate recommendations for practice based on well-founded findings. The study showed that acceptance is conditioned by trust, one of the variables analyzed in older trends of EPMS research, as it turned out that not only the features of the tool itself, but also contextual factors, such as evaluation of the workplace, are conducive to reducing dissatisfaction with monitoring. It has also been shown that, assuming that the EPMS is designed in a reasonable way, i.e. it enables employees to increase the efficiency of their own work through the operation of this system (e.g. by accessing chosen data), it can be expected that in a work environment where there is trust you can be less afraid of dissatisfaction with monitoring and its consequences. However, it should be remembered that dissatisfaction with monitoring is also affected by other factors not included in our study, as the obtained model explains only about ¼ of the variance of this variable.

If we assume that further research will confirm the results of our case study, we can put out some practical recommendations and advice. Firstly, the most important thing for reducing dissatisfaction with monitoring is the perceived impact of monitoring on increasing effectiveness evaluation of the workplace. Therefore, when planning the introduction of such a system, it is worth conducting a professional well-being study as defined by Gallup (Rath, Harter, 2010) and interventions increasing well-being (Woźniak, 2012). Secondly, the system should be designed in such a way that people who are being monitored have access to such monitoring data that can help them increase their work efficiency. It is not enough to properly design the system itself, but it is necessary – and this is the third practical recommendation – to train employees, drawing their attention to this data and the possibilities of using it.

Our study also requires us to treat the recommendations that were formulated earlier with reservation. In particular, the recommendation concerning system transparency, often emphasized in the literature (Ravid et al., 2020; 2023; Tomczak et al., 2018), should not be treated as a recommendation that information needs to be fully disclosed. The only fact that has been verified is that "the most negative reactions to EPM come from employees who do not know whether they are being monitored, why they are being monitored, or how they are being monitored" (Ambrose, Alder, 2000; as cited in Tomczak et al., 2018). Excess information does not have to be conducive to a better reception of the monitoring system – if the conditions under which monitoring is carried out are characterized by mutual trust, any concerns and ambiguities can be clarified on an ongoing basis.

Our study did not provide a direct argument against the importance of monitoring invasiveness for its acceptance. However, it should be emphasized that the monitoring system we analyzed is quite invasive – it consists not only of video monitoring, but also a scanner supervising employees' location and the tasks they perform. It can therefore be assumed that, similarly to transparency, the general attitude towards those introducing the change is more important than the specific parameters of the change that is introduced, assuming of course certain boundary conditions, well reflected in our study by a number of benefits that an employee can derive from the monitoring.

It should be remembered that a number of factors resulting from the specificity of our study limit how strongly practical recommendations can be made. This was a case study, so its results are also affected by characteristics of the place other than just the variables we measured. So further research is necessary, in different kinds of companies with different internal conditions and different social contexts in which the monitoring is implemented, in order to be able to formulate conclusions. Secondly, our study is based on opinions collected via a questionnaire, so most of the measures are based on respondents' declarations. Hence, it is necessary to extend these studies, on the one hand to include data collected differently, and on the other – to replace questionnaire-elicited data with data collected using in-depth interviews or objective measures (e.g. for work efficiency, objective measures could be collected by direct observation or as data from monitoring devices). It is also hugely important to extend the research to other industries. We have no arguments that would undermine the thesis that the results we obtained are an artifact resulting from the specific expectations of warehouse workers, i.e. people with little opportunity to shape their career path with an employer other than a logistics warehouse operating near their place of residence. It is therefore necessary to extend research on monitoring to other industries, especially in view of the widespread expectation that electronic monitoring systems, and in particular monitoring and surveillance using AI, will become commonplace in the near future.

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