

MICROMANAGEMENT: FROM INTERPERSONAL INTERACTION TO DIGITAL MONITORING

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Abstract: *The study analyzes the evolution of micromanagement (MM) within the context of changing work environments driven by digitalization and the rise of onsite, hybrid, and remote work arrangements. The research investigates the effects of three distinct forms of MM – proximity control (onsite), excessive reporting (hybrid) and digital monitoring (remote) – on employee performance, stress levels, job satisfaction and autonomy. A mixed-methods approach was adopted, based on a sample 197 employees in Romania. Quantitative data were processed using statistical methods such as ANOVA and Structural Equation Modeling in Jamovi, complemented by a qualitative content analysis of respondent perceptions conducted in MAXQDA. The findings highlight that digital monitoring has negative effects on performance and job satisfaction, while excessive reporting is associated with increased stress levels. The qualitative analysis reveals a "paradox" of digitalization, where digital monitoring is perceived as 20% more invasive of autonomy than physical control. Furthermore, employee performance varies across work arrangements, reaching its highest levels in hybrid environments. The conclusion emphasizes the importance of maintaining a balance between managerial control and employee autonomy within contemporary work organizational models.*

Keywords: micromanagement (MM), performance, autonomy, on-site, hybrid, remote.

JEL Classification: M120, M150, M540, D230, J240, C520.

1. Introduction

Over the past few decades, the work environment has undergone radical transformations. Moving away from rigid, classical hierarchical structures, organizations have progressively shifted toward increasingly flexible models, supported by digitalization and the widespread adoption of remote work (Popa, 2022). Against this backdrop, the dynamics between control and autonomy have emerged as a central point of scholarly debate. The transition from physical to hybrid or fully remote work settings has necessitated a fundamental reassessment of how performance is monitored. Micromanagement (MM) remains a leadership style that continues to generate divergent academic perspectives. Nevertheless, there is broad consensus regarding its definition: "excessive, unwanted and counterproductive control that disrupts the work of others" (Chambers, 2004, p. 11). Considering the foregoing, MM is widely regarded as having a negative impact on employees (Cho et al., 2017). Nonetheless, some researchers, such as Pastel (2008), consider MM to be an appropriate leadership style owing to its centralized decision-making and its efficient approach to risk mitigation.

One of the most cited authors about MM, Chambers (2004), argues that MM manifests through the imposition of strict supervision that limits employee autonomy, highly detailed reporting requirements and the manager's constant involvement in day-to-day activities.

Although MM has been extensively examined in the international literature, research addressing this phenomenon within the Romanian organizational context remains limited, particularly regarding how its distinct forms manifest across different work arrangements. Accordingly, the present study aims to analyze the effects of three identified forms of management: proximity control (specific to on-site work), excessive reporting (specific to hybrid work) and digital monitoring (specific to remote work) on relevant organizational variables, including employee performance, stress levels, job satisfaction and autonomy.

2. Theoretical background

2.1. Micromanagement

Definitions of MM are manifold (White, 2010). Broadly, MM is defined as "the control of a business or enterprise in every aspect, down to the smallest detail with the effect of obstructing progress and neglecting higher-level issues" (White, 2010, p.71). In 1960, through his seminal work introducing Theory X and Theory Y, Douglas McGregor (1966) associated the Theory X manager with the characteristics of modern MM, arguing that such a manager exhibits an inability to delegate tasks effectively, while erroneously believing that their approach constitutes efficient delegation. Although MM has always existed within organizational life, the term was first referenced in 1975 in "The Economist", marking the foundation for subsequent studies on the negative impact of such managerial behavior (White, 2010). MM is frequently characterized as an ineffective leadership method, one that relies on excessive control over both processes and employees.

In most instances, managers appear or consider themselves to be well intentioned, yet there is rarely an awareness of the negative effects their behavior has on motivation, autonomy, competence, performance, stress levels and beyond (Lee et al., 2023). The study conducted by Chambers (2004) reinforces this point: 91% of MM practitioners failed to recognize that their leadership style was the primary reason for employee resignations. Moreover, more recent research found that micromanagement is perceived as the worst trait a manager can possess (Comparably, 2018). The impact of MM was further amplified following the COVID-19 pandemic, as employees increasingly worked in hybrid or remote arrangements, intensifying the managerial tendency toward control (O'Connell, 2020).

Chambers (2004) contends that MM is a highly subjective concept. More specifically, an individual may perceive a given situation positively as support, while another may interpret the same situation negatively as an unwanted intervention. Similarly, collaborative guidance may be perceived as manipulation by some or as excessive control by others.

2.2. The dynamics of MM across work arrangements

The evolution of MM from interpersonal interaction to digital monitoring reflects a strategic adaptation to the new realities of work, in which the absence of physical visibility is compensated through digital control mechanisms. Whereas in the on-site work environment MM is characterized by direct visual surveillance and physical proximity (White, 2010), the shift to a hybrid arrangement, combining office and remote work, compels managers to resort to intensified bureaucratic reporting as a means of verifying subordinates' activity (Kelliher & Anderson, 2009). In fully remote settings, MM is exercised through digital monitoring tools that transform employees' behavior into quantifiable data (Moore, 2018). Given that managerial control mechanisms are profoundly shaped by the work environment, the following hypothesis is proposed:

H1: There are significant differences in employee performance depending on the work arrangement: on-site, hybrid and remote.

Furthermore, beyond the work arrangement itself, the specific form of MM constitutes a decisive factor in determining individual performance. Accordingly, the following hypothesis is proposed:

H2: There is a significant difference in employee performance depending on the type of micromanagement: proximity control, excessive reporting and digital monitoring.

2.2.1. Proximity control (on-site)

In the traditional office environment, proximity control represents the classical form of managerial surveillance, in which superiors monitor employees through constant physical presence and direct interactions. This approach is rooted in historical models of organizational control, while direct and visible intervention in employee behavior was considered essential for maintaining organizational discipline. Physical proximity thus enables managers to observe work processes and intervene in cases of deviation, a practice perceived as a traditional yet intensive form of MM (Kayas, 2023).

Contemporary literature suggests that strict proximity-based supervision carries significant psychosocial costs. Several studies have concluded that the physical presence of a manager or frequent check-ins creates a perception of a dominant organizational climate with adverse effects on trust and occupational anxiety. When taken to extremes, such practices may elicit counterproductive employee responses, including resistance to control or disengaged behavior (Siegel, Konig and Lazar, 2022). Considering the above, the following hypothesis is proposed:

H3: Micromanagement manifests predominantly through proximity control (physical surveillance) among employees working on-site.

2.2.2. Excessive reporting (hybrid)

With the growing prevalence of hybrid work arrangements, a shift has occurred from direct physical visual surveillance toward a form of control mediated by excessive reporting requirements. The partial absence of interpersonal interaction has thus been compensated by managers through the multiplication of work-time justification mechanisms. Research conducted by Kelliher and Anderson (2009) described this phenomenon as a form of work intensification, wherein employees who benefit from a degree of flexibility in their work arrangement feel additional pressure to provide continuous evidence of their daily activity to demonstrate productivity.

In hybrid settings, MM manifests through demands for frequent task updates, monitoring spreadsheets and detailed activity reports, effectively redirecting a portion of productive work time toward the documentation of work itself. This reporting functions as a substitute for physical presence: since the manager can no longer directly observe effort in real time an excess of bureaucracy provides a semblance of control (Kelliher & Anderson, 2009). The foregoing leads to the formulation of the following hypothesis:

H4: Micromanagement manifests predominantly through excessive reporting among employees working in hybrid arrangements.

2.2.3. Digital monitoring (remote)

In fully remote work environments, MM undergoes a significant shift, transitioning from human control to algorithmic oversight. Software tools, commonly referred to as bossware, record mouse movements, keyboard activity and periodic screen capture at irregular intervals, equating periods of digital inactivity with a lack of productivity. This compels employees to perform productive behavior in front of the screen, not merely in the physical sense (Moore, 2018). In line with findings in the existing literature, Ștefan, Popa and Mircioiu (2023) highlight that the online environment entails continuous adaptation in the conduct of activities and increased participant engagement as a means of enhancing performance and competencies. In this context, competencies and performance may be further developed through e-learning platforms, which facilitate geographical access and resource availability and, above all, prepare organizations for unforeseen events (Ștefan, Popa and Mircioiu, 2023).

Among the primary effects of digital MM is the *technological panopticon*, the employees' fear of being observed at any moment, without knowing when monitoring begins or ends. According to Moore (2018), the remote worker loses professional autonomy, being reduced to a *data body* that prioritizes speed and digital presence at the expense of quality or creativity, driven

by the pressure of algorithms that generate real-time productivity scores. Based on the foregoing, the following research hypothesis may be formulated:

H5: Micromanagement manifests predominantly through digital monitoring among employees working remotely.

2.3. The effects of micromanagement

Performance. In the majority of cases, MM acts as a barrier to operational efficiency by exerting negative effects on creativity and innovation. Operational inefficiency may thus be understood as a consequence of excessive process control (Bwalya, 2024). Performance is also substantially contingent upon the informational resources, including software tools and databases, made available by the organization. When such resources are provided to employees, they are better equipped to acquire the skills necessary for completing tasks efficiently. Conversely, when informational resources are limited, employees encounter difficulties in task completion, which decisively undermines workplace performance (Popa et al., 2024). According to Dash (2025), citing the study by Decaro (2011), elevated levels of MM are frequently correlated with decreased productivity and employee performance, given that excessive supervision erodes employee trust, and particularly their effectiveness. Nevertheless, there are organizational contexts in which MM may yield positive effects on employee performance. Accordingly, the following research hypothesis has been formulated:

H6: Micromanagement negatively influences individual employee performance.

Stress Levels. MM undermines employees' sense of psychological safety, which is directly associated with heightened stress, including anxiety and cognitive overload in everyday tasks (Dash, 2025). Research identifies MM as a significant predictor of occupational stress, as the pressure exerted through constant control intensifies psychological vulnerability, MM represents one of the primary drivers of emotional exhaustion and burnout syndrome, particularly in environments characterized by continuous monitoring. In accordance with the *Job Demands-Resources Model*, excessive managerial control is frequently interpreted as an organizational demand that depletes employees' psychological resources, thereby increasing stress levels (Bakker & Demerouti, 2007). Accordingly, the following hypothesis is proposed:

H7: Micromanagement positively influences (i.e., increases) levels of stress and anxiety.

Autonomy. Autonomy may be considered one of the fundamental pillars of organizational efficiency and motivation. It is directly associated with intrinsic motivation and the assumption of professional responsibility. MM is antithetical to autonomy, as it entails the centralization of decision-making and the restriction of employees' freedom of action. Recent research on leadership indicates that when employees come to perceive their manager as exhibiting MM characteristics, they tend to avoid risk-taking or active engagement. Consequently, MM constrains competency development and reduces employees' capacity for independent decision-making (Yukl, 2013). Based on the above, the following hypothesis is proposed:

H8: Micromanagement negatively influences employees' sense of autonomy.

Job Satisfaction. The degree of autonomy, trust and recognition perceived by employees represents only some of the factors influencing professional satisfaction. MM, by its very nature, impairs these fundamental dimensions of professional experience. According to *Self-Determination Theory*, job satisfaction is present only when three core psychological needs are fulfilled: autonomy, competence and relatedness (Deci & Ryan, 2000). Research by Judge et al. (2001) demonstrates a positive relationship between work perception and the level of job satisfaction. When employees are subject to constant scrutiny or perceive a loss of decision-making freedom, intrinsic motivation declines and the intention to leave the organization increases. Accordingly, the following hypothesis is proposed:

H9: Micromanagement negatively influences job satisfaction.

3. Research methodology

The aim of the present study was to examine the evolution of MM and its transformation in relation to changes in work arrangement structures. More specifically, MM was analyzed according to three work arrangement types – full on-site presence, hybrid (combining on-site and remote work), and fully remote – using scale-based survey items. To achieve this objective, a questionnaire-based survey was developed and subsequently distributed to employees across Romania. The research process proceeded from the definition of research objectives, through the development of the methodology and the administration of the questionnaire via Google Forms across social media platforms, to data analysis and the presentation of results. The data collection instrument comprised both demographic items, intended to provide a comprehensive profile of the sample, and Likert-scale items designed to assess key constructs, including MM types and employee performance. The scales employed were drawn from validated instruments previously used in management research, as follows: (1) proximity control was measured using the scales developed by Niehoff and Moorman (1993) and White (2010); (2) excessive reporting was assessed using the scales developed by Cleary et al. (2015) and White (2010); (3) digital monitoring was measured using the scale developed by Sulphey and Upadhyay (2019), supplemented by items proposed by the present author; (4) performance was measured using the scale proposed by Ramos-Villagrasa et al. (2019); (5) stress levels were assessed using the scale developed by Parker and DeCotiis (1983); (6) job satisfaction was measured using the scale proposed by Spector (1985); (7) autonomy was assessed using the scale developed by Morgeson and Humphrey (2006). Further details regarding the research scales and corresponding references are provided in the Appendices.

The target population comprised the active workforce in Romania. The research sample consisted of 197 employees from both public and private organizations who participated voluntarily in completing the questionnaire. With respect to the sampling strategy, a non-probability snowball sampling method was employed, whereby the online questionnaire was distributed to an initial set of respondents who subsequently forwarded it to other individuals within their professional network. This approach was selected for its capacity to rapidly reach a diverse pool of participants from organizations operating across different sectors, as well as for its effectiveness in facilitating data collection within a relatively short timeframe through social media platforms and digital communication channels.

The most represented age group in the sample was 30-45 years (37%). Of the total respondents, 57% identified as female, 38% held a bachelor's degree as their highest level of education, more than half (53%) were employed in organizations with between 50 and 250 employees, and the majority (75%) occupied non-managerial positions. The predominant experience level within the sample was 5-10 years (31%). Regarding work arrangements, 47% of respondents worked exclusively on-site, 14% worked fully remotely, and 39% followed a hybrid schedule. The collected data were analyzed using Jamovi statistical software (The Jamovi Project, 2026), which supports the range of analytical procedures required to address the research objectives. The primary analytical method employed was Structural Equation Modeling (SEM), used to determine the relationships between MM types and organizational constructs such as stress and performance. Additionally, a one-way Analysis of Variance (ANOVA) was conducted to identify differences in group means across the three work arrangement categories: on-site, remote, and hybrid employees.

In addition to the quantitative component, the study incorporated a qualitative dimension intended to capture the subjective nuances of employees' experiences with MM. To this end, MAXQDA Analytics Pro (version 26.1.0) (Verbi Software, 2026) was used to construct a coding tree. For this purpose, the questionnaire also included three open-ended questions that allowed respondents to define MM in their own words and to elaborate on their perceptions of digital monitoring and direct control.

4. Results

4.1. Performance and Micromanagement in relation to work arrangement

Hypothesis H1 was tested using the results of a one-way ANOVA for independent samples, presented in Table 1:

Table 1

Results of the One-Way ANOVA Analysis

Variables	On-site (N=92)		Hybrid (N=76)		Remote (N=29)		ANOVA Test		
	M	DS	M	DS	M	DS	F	df	p
Performance	3.44	0.779	3.47	0.859	3.10	0.625	3.50	2	0.035

Note: N – number of respondents; M – mean; DS – standard deviation

Source: Author's own conception using Jamovi (The Jamovi Project, 2026)

A between-groups one-way ANOVA was conducted to determine whether statistically significant differences existed in organizational performance across the three work arrangements: on-site, hybrid and remote. The results indicated that significant differences were preset in the mean scores of the variables measuring employees' organizational performance as a function of work arrangement ($F_{(2)}=3.50, p<0.05$). Employees in remote arrangements recorded the lowest performance score ($M = 3.10$), while those in hybrid arrangements recorded the highest ($M = 3.47$), a mean only 0.03 points above the on-site group ($M = 3.44$). A post hoc analysis using Tukey's test did not identify statistically significant differences between any specific pair of groups, suggesting that the significant effect observed is global rather than attributable to any single pairwise comparison.

In examining hypotheses H3, H4 and H5, reference is made to the results presented in Table 2:

Table 2

Results for hypotheses H3, H4 and H5

Hypotheses	Variables	On-site (N=92)		Hybrid (N=76)		Remote (N=29)		ANOVA test		
		M	DS	M	DS	M	DS	F	df	p
H3	Proximity control	2.99	0.795	2.88	0.790	2.75	0.866	1.06	2	0.352
H4	Excessive reporting	3.34	0.804	3.08	0.861	3.10	0.677	2.42	2	0.095
H5	Digital monitoring	3.18	0.993	2.82	0.962	3.31	0.758	4.47	2	0.014
	MM	3.17	0.656	2.93	0.649	3.05	0.502	2.88	2	0.061

Note: N – number of respondents; M – mean; DS – standard deviation; df – degrees of freedom

Source: Author's own conception using Jamovi (The Jamovi Project, 2026)

A one-way ANOVA for independent samples was conducted to determine whether statistically significant differences existed in the type of MM employed as a function of work arrangement: on-site, hybrid and remote. The results indicated that significant differences were found exclusively with respect to the mean score of digital monitoring across work arrangements ($F_{(2)} = 4.47, p < 0.05$). Regarding the highest mean score recorded for digital monitoring, this was observed in the remote work arrangement ($M = 3.31$), as anticipated, given that digital monitoring is predominantly applied in remote work environments.

4.2. Structural Equation Modeling

Structural Equation Modeling (SEM) enables the examination of relationships between exogenous (independent) and endogenous (dependent) variables. In the present study, the structural model comprises four endogenous constructs (organizational performance, stress levels, job satisfaction and sense of autonomy) and three exogenous constructs (proximity control, excessive reporting and digital monitoring) which, taken together, constitute the overarching

concept of MM. This model serves as the basis for validating or rejecting hypotheses H2, H6, H7, H8 and H9. A graphical representation of the model is presented in Figure 1. To validate the model, the goodness-of-fit indices of the structural model were examined. The residual fit indices, SRMR ($0.067 < 0.08$) and RMSEA ($0.035 < 0.06$), confirm a good model fit to the data. Similarly, the comparative fit indices CFI and TLI both yielded excellent values exceeding 0.95, while the NFI recorded a value of 0.906 (Ştefan, et al., 2025).

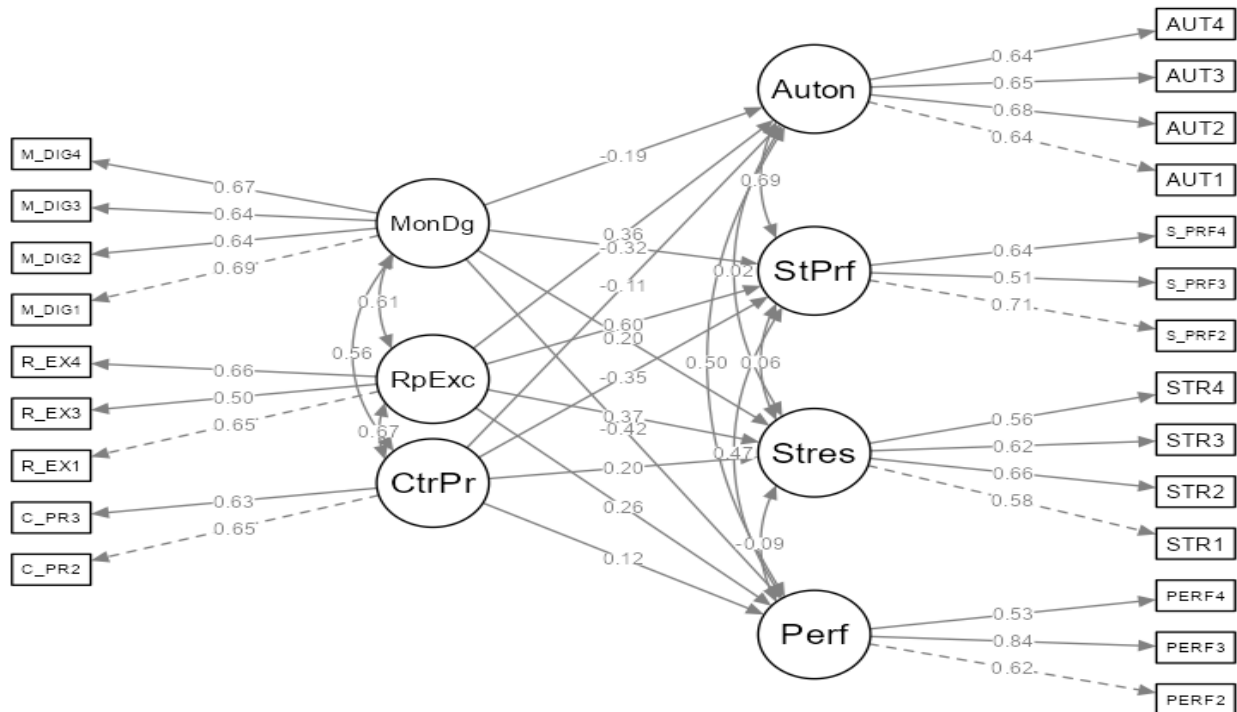


Fig. 1. Structural Equation Model

Note: MonDg – digital monitoring, RpExc – excessive reporting, CtrPr – proximity control, Auton – autonomy, StPrf – Job satisfaction, Stres – Stress, Perf - performance

Source: Author's own conception using Jamovi (The Jamovi Project, 2026)

The analysis of outer loadings led to the elimination of variables with values below the threshold of 0.5. Consequently, the final model includes only statistically significant variables whose load exceeds the 0.5 threshold. Discriminant validity was further assessed using the Heterotrait-Monotrait (HTMT) ratio. In the present study, all recorded values fell below 0.85, indicating the constructs are sufficiently distinct from one another (Shrestha, 2021). Table 3 presents a detailed overview of the model evaluation results based on the HTMT ratio.

Table 3

HTMT Ratio							
Constructs	Proximity control	Excessive reporting	Digital monitoring	Performance	Stress	Job satisfaction	Autonomy
Proximity control	1.000	0.654	0.5327	0.158	0.5259	0.0915	0.1150
Excessive reporting	0.6540	1.000	0.6332	0.166	0.6273	0.1896	0.1403
Digital monitoring	0.5327	0.633	1.000	0.144	0.4898	0.2346	0.0966
Performance	0.1580	0.166	0.1437	1.000	0.1307	0.4182	0.5067
Stress	0.5259	0.627	0.4898	0.131	1.000	0.0836	0.1153
Job satisfaction	0.0915	0.190	0.2346	0.418	0.0836	1.000	0.6948
Autonomy	0.1150	0.140	0.0966	0.507	0.1153	0.6948	1.000

Source: Author's own conception using Jamovi (The Jamovi Project, 2026)

The analysis of the coefficient of determination R^2 indicates the extent to which the model accounts for the variance in the constructs under examination. Specifically, the model explains 44.9% of variance in stress levels, 19.1% of the variance in job satisfaction, 11% of the variance in performance and only 6.5% of the variance in autonomy.

Within the SEM framework, the analysis examined whether significant differences existed in employee performance across the three MM types, as well as the individual influence of each MM type on performance, stress, job satisfaction and autonomy. Path coefficients were further analyzed to determine the validation of the research hypotheses, as presented in Table 4:

Table 4

Analysis of results regarding the effects of MM

Hypotheses	Dependent variable	Independent variables	β	z	p
H2, H6	Performance	Proximity control	0.121	0.744	0.457
		Excessive reporting	0.261	1.560	0.119
		Digital monitoring	-0.418	-3.532	<0.001
H7	Stress	Proximity control	0.200	1.253	0.210
		Excessive reporting	0.369	2.297	0.022
		Digital monitoring	0.199	1.932	0.053
H8	Autonomy	Proximity control	-0.108	-0.708	0.479
		Excessive reporting	0.362	2.206	0.027
		Digital monitoring	-0.189	-1.833	0.067
H9	Job satisfaction	Proximity control	-0.347	-1.528	0.126
		Excessive reporting	0.596	2.517	0.012
		Digital monitoring	-0.317	-2.345	0.019

Note: β – path coefficients

Source: Author's own conception using Jamovi (The Jamovi Project, 2026)

The results thus reveal multiple relationships within the model. Proximity control exerts a positive yet weak influence on performance, a relationship that is statistically non-significant ($\beta = 0.12$; $p > 0.05$), as is its effect on stress levels ($\beta = 0.20$; $p > 0.05$). This MM type also demonstrates statistically non-significant negative effects on job satisfaction ($\beta = -0.35$; $p > 0.05$) and autonomy ($\beta = 0.11$; $p > 0.05$). Excessive reporting exhibits weak, statistically non-significant positive effects on performance ($\beta = 0.26$; $p > 0.05$), moderate effects on stress ($\beta = 0.37$; $p < 0.05$), autonomy ($\beta = 0.36$; $p < 0.05$) and strong effects on job satisfaction ($\beta = 0.60$; $p < 0.05$). Notably, a strong association is observed between excessive reporting and job satisfaction. Finally, the implications of digital monitoring across the four constructs warrant particular attention. Of the four relationships, two are weak and two are moderate: the weak, non-significant relationships concern stress levels ($\beta = 0.20$; $p > 0.05$) and a negative effect on autonomy ($\beta = -0.19$; $p > 0.05$), while the moderate relationships are both statistically significant and negative, affecting performance ($\beta = -0.42$; $p < 0.001$) and job satisfaction ($\beta = -0.32$; $p < 0.05$). Accordingly, hypotheses H2, H6, H7, H8 and H9 are partially supported.

4.3. MM Coding Tree

Complementing the quantitative analysis presented above, the qualitative dimension of the study explores the multifaceted nature of MM through a qualitative approach, employing MAQDA Analytics Pro (26.1.0). Four root categories were identified: employee perceptions, the role of digital tools in the control process, the effects of digital monitoring and the effects of direct control. For each root category, five coding branches were identified, as illustrated in Figure 2.

With respect to employees' perceptions of MM in the workplace, four of the five coding branches recorded closely distributed values. Specifically, one quarter of respondents (25.89%) considered MM to be a leadership style rooted in the manager's lack of trust in employees. The branches addressing the excessive control exercised by managers over employees and the positive/negative effects of MM on employees each recorded an equal proportion of responses

(23.35%). A further 18.78% of respondents characterized MM as managerial interference in all activities carried out by employees, while 8.63% provided unclear responses, including non-responses or erroneous answers.

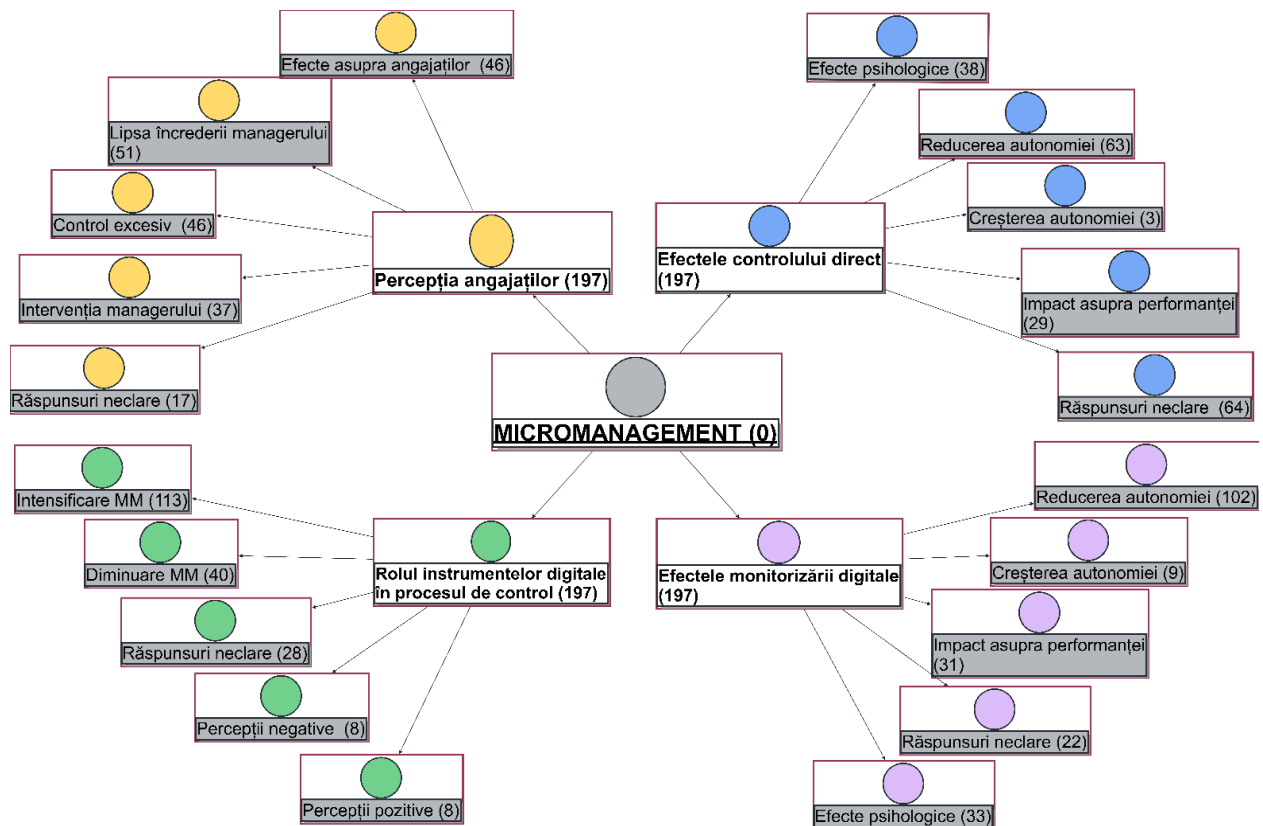


Fig. 2. Content analysis coding tree

Source: Author's own conception using Jamovi (The Jamovi Project, 2026)

Within the root category concerning the role of digital tools in the control process, the dominant branch was the intensification of MM (57.36%), accounting for more than half of all recorded responses. The second most frequent branch was the diminishment of MM (20.3%), which represents the opposing perspective. Approximately 4% of respondents expressed negative perceptions (4.06%), while an equal proportion reported positive perceptions regarding digital monitoring and 14.21% provided unclear responses, including non-responses or failure to understand the question.

The effects of digital monitoring and those of direct control were examined comparatively within the same survey item. Regarding the effects of both MM types, the branch pertaining to autonomy reduction accounted for 51.77% of responses in the case of digital monitoring and 31.98% in the case of direct control. The branch addressing autonomy enhancement recorded markedly lower values: 4.56% for digital monitoring and only 1.52% for direct control. With respect to the impact on performance, the data extracted indicate a relatively balanced perception between the two forms of control, with a slight predominance in the case of digital monitoring (15.74%) over direct control (14.72%). Psychological effects accounted for 16.76% of responses in the case of digital monitoring and 19.29% in the case of direct control. Unclear responses represented 11.17% for the digital monitoring root category, compared to 32.49% for the direct control root category. The primary explanation for this discrepancy lies in the fact that both root categories were embedded within the same survey item, leading respondents to focus predominantly on the first aspect addressed, namely digital monitoring.

5. Discussion

The findings pertaining to hypothesis H1 corroborate the research conducted by Stănescu and Romaşcanu (2023), who examined various organizational constructs, including performance and work engagement. Their results similarly identified lower performance among employees working remotely compared to those in hybrid arrangements.

From a managerial standpoint, this finding implies a paradigm shift, as performance is not directly proportional to physical office presence. Given the marginal difference between hybrid and on-site work, managers can optimize organizational resources without compromising efficiency. Conversely, the lower performance recorded among remote employees underscores the need for targeted interventions, such as improvements to digital infrastructure and work processes, aligning remote productivity as closely as possible with that observed in on-site and hybrid arrangements.

Although no statistically significant differences were found across the MM types presented in Table 2, except for digital monitoring, the highest mean score for proximity control was recorded in the on-site work arrangement ($M = 2.99$), as anticipated, given that this MM type manifests predominantly in physical settings. To provide an overall perspective, the mean scores across the three MM types were aggregated. MM manifests most prominently in the on-site environment ($M = 3.17$), followed by the remote arrangement ($M = 3.05$), and finally the hybrid arrangement ($M = 2.93$). Post hoc analysis using Tukey's HSD test identified significant differences exclusively in the manifestation on MM through digital monitoring between on-site and hybrid arrangements with a difference of approximately 0.35. The results presented in Table 2 support the contention that MM is not eliminated by evolution of work frameworks, but rather through new forms of control. With respect to the three MM types examined, the hybrid work arrangement emerges as the most balanced context for MM, with mean scores positioned between those of the other two work arrangements in two out of three cases. Accordingly, the hybrid work environment represents not merely a logistical solution, but also an organizational context that discourages rigid monitoring practices and frequently constitutes a more conducive setting for the development of employee autonomy.

Furthermore, digital monitoring records higher mean scores in remote work arrangements ($M = 3.31$) compared to other work structures. These findings are consistent with the existing literature. Specifically, the study conducted by Andrade et al. (2025), applied to a sample comprising exclusively remote and hybrid employees, confirms that digital monitoring is frequently employed by organizations to track employee activity in the absence of physical proximity.

The results of the content analysis demonstrated that the central pillar in defining MM remains managers' lack of trust in employees. This lack of trust may be symptomatic of a deficient organizational culture, as managers who have not developed output-based evaluation mechanisms tend to rely on digital tools to measure employee activity (input).

One of the key findings of the present study concerns the approximately 20% discrepancy in the perceived reduction of employee autonomy between direct control (31.98%) and digital monitoring (51.77%). Although technology is frequently promoted as a tool for enhancing work flexibility, the data suggest a digitalization paradox: digital tools, such as monitoring software and "active/away" status indicators, are perceived as considerably more invasive than the physical presence of a manager. This discrepancy may be explained by the omnipresent nature of technology. Digital monitoring can be perceived as total surveillance, which frequently engenders anxiety from the employee's perspective. By contrast, direct control is confined to office hours and physical presence.

These findings are consistent with the conclusions drawn by Kalischko and Riedl (2021), who followed a systematic review of the literature on *Electronic Performance Monitoring (EPM)*, demonstrating that the latter is perceived as approximately 20% more invasive by employees.

Although the impact on performance is perceived as relatively equal across both MM forms (approximately 15%), psychological effects remain pronounced. Notably, despite digital monitoring appearing at first glance to be more impersonal, it generates psychological effects of nearly equivalent magnitude to those of direct control (16.76% vs. 19.29%). This confirms that MM, regardless of the environment in which it is exercised, carries implications for employees' fundamental psychological needs. Furthermore, the fact that over 57% of respondents consider digital tools to have intensified MM suggests that technology has provided managers with new opportunities to exercise comprehensive control over employee activity.

From a managerial perspective, the findings underscore the need to reconsider coordination mechanisms for teams operating in hybrid or remote arrangements. Although digital tools afford organizations the capacity for real-time monitoring of employee activity, their excessive use may produce outcomes contrary to those intended, by diminishing autonomy and reinforcing the perceptions of constant surveillance. In this context, managers should orient their practices toward performance evaluation based on outcomes and objectives achieved, rather than continuous monitoring of the work process.

Moreover, organizations should establish transparent policies regarding the use of digital monitoring tools, clearly communicating their purpose and involving employees in defining the relevant usage guidelines. In this way, technology may become an instrument for supporting work and collaboration rather than a mechanism of excessive control. The findings of the present study suggest that the balance between autonomy and control constitutes an essential factor in maintaining job satisfaction, reducing stress and sustaining individual performance, particularly within teams operating under flexible work structures.

6. Conclusions

The present study aimed to examine the evolution of the MM phenomenon in the context of workplace transformations and to evaluate its effects on relevant organizational variables. More specifically, the study investigated the manner in which the three forms of MM – proximity control, excessive reporting and digital monitoring – influence employee performance, stress levels, job satisfaction and autonomy. From a methodological standpoint, the research adopted a mixed-methods approach, combining a quantitative method (a questionnaire analyzed through SEM and ANOVA using Jamovi) with a qualitative method (MAXQDA Analytics Pro), through the coding and analysis of respondents' perceptions, using a questionnaire-based survey for data collection. The survey yielded 197 valid responses from employees across Romania.

The research finding demonstrated that work arrangement structure influences employee performance to a certain degree, with significant differences identified across on-site, hybrid and remote environments. Furthermore, digital monitoring was found to manifest predominantly in remote settings and to exert a negative influence on both performance and job satisfaction. Excessive reporting was associated with increased stress levels, yet also with higher levels of job satisfaction and autonomy. By contrast, proximity control did not exhibit statistically significant relationships with any of the variables under examination.

The detailed analysis of respondents' perceptions confirms the existence of a digitalization paradox. Although digital tools are frequently promoted as enablers of workplace flexibility, they are perceived as approximately 20% more invasive with respect to autonomy than traditional direct control. This demonstrates that digital monitoring is experienced as a form of total surveillance, transforming MM from a limited interpersonal interaction into an omnipresent process.

The findings suggest that the excessive use of control mechanism – particularly digital monitoring – can have adverse effects on employees' performance and job satisfaction. In this context, managers should prioritize the rebuilding of trust and the adoption of output-based performance evaluation, moving away from the tendency to use technology solely to measure presence or activity (input) – a practice identified as the primary driver of MM intensification in

remote work environments. Accordingly, managers should maintain a balance between control and autonomy, particularly in hybrid and remote work settings.

The primary limitation of the study is the relatively small sample size, which resulted in an uneven distribution of respondents across the three work arrangement categories: on-site, hybrid and remote. An additional limitation concerns the use of a non-probability snowball sampling method, which may affect the representativeness of the sample and limit the generalizability of the findings to the broader active workforce in Romania. Future research could expand the sample size, examine additional organizational variables and investigate the role of factors such as professional experience, sector of activity and generational differences in the relationship between MM and performance – as well as whether the perceived invasiveness of digital monitoring with respect to autonomy diminishes as professional experience increases.

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Appendix

Appendix 1

Research scales

Concept	Item	Source
Proximity control	Frequently uses direct observation to evaluate my performance.	(Niehoff & Moorman, 1993)
	Frequently check on me to see what I am doing at a given moment.	
	Steps in even when I can handle the task independently.	
	Describes in detail each step of how a task should be executed.	
Excessive reporting	Insist on receiving task outputs well before the established deadline.	(Cleary et al., 2015)
	Request constant updates on task progress.	(White, 2010)
	Focuses on minor details that do not affect the overall quality of the work.	
	Frequently requires justifications for the activities I carry out.	
Digital monitoring	Continuously monitors me through digital communication platforms (e.g. Teams).	(Sulphey & Upadhyay, 2019)
	Evaluates my performance based on the time I spend online.	Author's own conception
	Frequently checks my "Online/Offline" status.	
	Monitors even routing activities on a constant basis.	(Sulphey & Upadhyay, 2019)
Performance	I actively participated in meetings and/or consultations.	(Ramos-Villagrasa et al., 2019)
	I carry out my work efficiently.	
	I successfully complete difficult or challenging tasks.	
	I achieve the objectives set for me in the workplace.	
Stress	I feel stressed because of my job.	(Parker & DeCotiis, 1983)
	The work I perform leaves me little time for other activities.	
	I feel guilty when I take time off from work.	
	I have too large a workload and too little time to complete it.	
Job satisfaction	I feel I am insufficiently compensated for the work I perform.	(Spector, 1985)
	I enjoy the people I work with.	
	I am satisfied with the opportunities for advancement.	
	I enjoy the work I perform at my workplace.	
Autonomy	I am free to plan my own working time.	(Morgeson & Humphrey, 2006)
	I can make independent decisions to complete my tasks.	
	I have the freedom to choose how I carry out my work activities.	
	I can complete tasks I have begun without constant intervention from my manager.	