Vol. 14, No. 2, 21-34
doi:10.17708/DRMJ.2025.v14n02a02

Dynamic Relationships Management Journal

INCREASED SPAN OF SUPERVISION: AN OBSTACLE FOR EFFECTIVE LEADERSHIP STYLE?

Geir Thompson*
Hauge School of Management, NLA University College, Oslo, Norway
geir.thompson@nla.no

Robert Buch
Oslo Business School, OsloMet – Oslo Metropolitan University, Oslo, Norway

Per-Magnus Moe Thompson
Department of Leadership and Organisational Behaviour, BI Norwegian Business School, Oslo, Norway

Abstract

This study delves into the complex relationship between hierarchical structure represented by span of supervision, leadership style and outcomes. Drawing from contemporary social exchange concept, we examine if increase in the span of supervision alter the leader-follower dynamics by imposing limitations on leaders' ability to fine-tune their directive actions and diminish opportunities for providing support and positive feedback, resulting in adverse effects.
Øverst i skjemaet
Nederst i skjemaet
To investigate this, data from surveys involving 103 leaders and 675 followers across 43 medium-to-large business organizations were meticulously analyzed, seeking to reveal expected interactions among various factors. Structural Equation Modeling analysis, accounting for robust standard errors, revealed that an increased span of supervision was associated with adverse impacts on leaders' leadership style. These negative consequences, in turn, correlated with diminished follower performance, an increase in social loafing, and a higher likelihood of intending to leave the organization. Consequently, this study poses critical questions about the presumed effectiveness of organizational change efforts involving the broadening of leaders' supervisory roles. The findings underscore the necessity for a more nuanced understanding of the implications of hierarchical changes on leadership dynamics and organizational outcomes.

Keywords: *Span of supervision, Leadership, Follower performance, Social loafing, Turnover intention*

1 INTRODUCTION

Contemporary management trends continue to advocate for flatter organizational hierarchies across numerous industries and sectors (Zoller & Muldoon, 2020). This approach, characterized by a significant increase in the number of individuals under the supervision of a single leader, is commonly referred to as the span of supervision (Neilson & Wulf, 2012). The span of supervision plays a critical role in organizational structure and management, as it directly affects leadership efficiency and effectiveness. A narrower span allows for more personalized supervision, while a broader span necessitates more delegation and potentially reduces direct oversight. While broader spans of supervision offer benefits such as fostering employee autonomy and improving cost-effectiveness, they also raise concerns regarding reduced managerial effectiveness.

Existing research suggests that expanding a leader's span of supervision is associated with negative outcomes such as lower individual performance, social loafing, and reduced team cohesiveness (Liden et al., 2004; Mueller, 2012). Laboratory studies have shown that increasing the number of individuals working on the same task results in decreased individual effort (Harkins, Latané & Williams, 1980; Ingham et al., 1974). However, there is a lack of comprehensive understanding of the mechanisms driving these negative effects, and more research is needed to uncover the underlying processes that contribute to diminished individual performance in broader supervisory contexts (Zoller & Muldoon, 2020). Mueller (2012) provided partial evidence that loss of coordination and extrinsic motivation mediate the relationship between a leader's span of supervision and reduced individual performance. However, her study left several potential mechanisms unexplored, calling for further investigation into leadership activities that could either mitigate or exacerbate these effects.

The main purpose of this study is to investigate how leadership behaviors—specifically supportive and directive leadership styles—mediate the relationship between span of supervision and key employee outcomes, such as individual performance, social loafing, and propensity to quit. By examining leadership behaviors as mediators, this study aims to explore the mechanisms through which broader spans of supervision may influence these outcomes. The aim is to fill the existing gap in the literature regarding the role of leadership in moderating the effects of supervisory span, and to provide empirical insights that can inform more effective leadership practices in organizations with wider spans of control. Accordingly, the central research question guiding this study is: *How do supportive and directive leadership behaviors mediate the relationship between span of supervision and individual outcomes such as performance, social loafing, and the propensity to quit?* Through this research, we seek to enhance the understanding of how leadership styles can mitigate or amplify the challenges associated with broader spans of supervision, contributing to both theory and practice in leadership and organizational management.

This study makes contributions to three primary areas of research: leadership theory, organizational structure, and group dynamics. By integrating leadership styles as mediating variables, this study contributes to leadership theory, specifically by adding insights to how supportive and directive leadership behaviors function within the context of organizational structures like span of supervision. Previous research has primarily focused on leadership styles in isolation, without fully considering how these styles may interact with specific structural features of organizations, such as the number of subordinates per supervisor. This study contributes to the ongoing discussion on how different leadership behaviors can either mitigate or exacerbate the effects of organizational structures on employee outcomes.

Additionally, the study makes a significant contribution to the field of organizational structure and design by examining the implications of span of supervision on employee performance. While previous research has explored the broad effects of wider spans of supervision, the present study introduces leadership behaviors as a critical factor influencing the success of broader spans. This insight contributes to a deeper understanding of how the interaction between organizational structure and leadership style can shape individual-level outcomes. By doing so, the study adds to the debate on how organizations can balance the need for flatter hierarchies with the potential drawbacks of reduced supervision.

Finally, this research contributes to the area of group dynamics and team performance by exploring social loafing in relation to span of supervision and leadership. Although social loafing has been widely studied in terms of team performance, its connection to leadership behaviors and span of supervision has received limited attention. By investigating how leadership behaviors mediate the effects of span of supervision on social loafing, the study offers significant theoretical and practical contributions. The findings will provide insights into how leadership styles can mitigate or exacerbate the negative effects of broad spans of supervision, offering guidance for organizational leaders on how to structure teams and manage employees more effectively.

2 THEORY AND HYPOTHESES

The foundation of this study is grounded in social exchange theory (Blau, 1964; Cropanzano et al., 2017). Social exchange theory elucidates the interdependent interactions between parties, elucidating how and why relationships evolve over time. At its core, social exchange theory posits that individuals, guided by the principle of reciprocity (Gouldner, 1960; Tsai & Kang, 2019), tend to mirror the treatment they receive with similar treatment. In instances where a leader within this exchange relationship fails to fulfill their obligations, followers are inclined to reciprocate with negative behaviors, such as engaging in social loafing (De Ruiter et al., 2016; Zhao et al., 2007). Consequently, our current investigation is grounded in social exchange theory as the overarching framework, forming the basis for the development of the three study hypotheses (Cropanzano et al., 2017).

Social scientists have discerned a range of consequences associated with an expanded span of supervision. For instance, when leaders and followers are physically closer, it tends to facilitate communication processes and enhance the quality of their interactions (Yammarino & Bass, 1990). Conversely, in situations with a larger span of supervision, leaders may seem distant from their followers, maintaining infrequent contact. Additionally, leaders overseeing a wide span of supervision often contend with greater time constraints compared to those with fewer subordinates (Schriesheim et al., 2000; Anand, Vidyarthi, & Park, 2016). This altered dynamic can affect the way leaders influence their followers. Specifically, a broader span of supervision can limit leaders' ability to adapt and tailor their directives to elicit desired responses from individual followers, leading to a more generalized approach and reduced individualized attention for employees. Building upon Podsakoff et al.'s (1984) findings, increasing spans of supervision can prompt leaders to treat their followers in a more uniform and arbitrary manner, lacking contingent responses to each follower's needs. Furthermore, an expanded span of supervision may restrict leaders' opportunities to directly observe follower performance, potentially rendering performance evaluations as arbitrary or ill-informed. Moreover, a larger span of supervision may curtail leaders' ability to exhibit supportive behavior, respond positively to followers' setbacks, offer assistance, and provide guidance for navigating specific challenges. In line with social exchange theory, when leaders maintain infrequent contact with followers, display less interpersonal sensitivity (Antonakis & Atwater, 2002), and limit their directive and supportive actions, followers are likely to respond with actions such as decreased task performance. Hence, based on these considerations, we hypothesize:

Hypothesis 1: Span of supervision is negatively associated with individual performance via a) decreased directive and b) decreased supportive leadership.

Social loafing represents another potential outcome linked to an expanded span of supervision, influenced by both supportive and directive leadership. The phenomenon of individuals withholding their contributions in a group setting has been attributed to the increase in group size (Littlepage, 1991; Alnuaimi et al., 2010). Researchers have posited that in contexts with a broader span of supervision, followers may perceive their contributions as less critical to the group's success, leading to diminished motivation to actively participate (Chidambaram & Tung, 2005). However, empirical investigations into the mechanisms driving these effects have been relatively limited. Advancing this field of study requires identifying the underlying mechanisms that link team size to social loafing tendencies. In light of these considerations, our study contends that both supportive and directive leadership play pivotal roles in fostering a positive and emotionally secure environment where followers are more inclined to trust and respect one another (Byun et al., 2020). Such an environment promotes a positive and fulfilling work-related state of well-being, which should mitigate social loafing tendencies. Conversely, directive leadership, which involves organizing followers' roles to ensure their success, enhances the perception of a robust leader-follower relationship (Gottfredson & Aguinis, 2017), thereby boosting employee retention. However, a larger span of supervision can curtail leaders' ability to provide support to followers during setbacks, lead-

ing followers to feel that their contributions are inconsequential due to the lack of individualized attention (Price, 1993). In response, followers may restrict their personal efforts and contributions to the organization, a behavior known as social loafing. Nevertheless, when this behavior occurs within a social exchange relationship marked by an imbalance of power, such as between the leader and team members, followers may suppress their urge to respond, fearing potential reprisals, career risks, and financial instability. Consistent with social exchange theory, which portrays social exchange as a relatively rational and calculative process, we posit that followers may restrain their inclination to act out of concern for potential consequences. In smaller teams, such dysfunctional behavior is more conspicuous. However, in the context of an expanded span of supervision and greater social distance between leader and follower, the risk of detecting follower social loafing and the likelihood of leader reprisals against the employee diminish. With a broader span of leadership, followers may feel freer to limit their personal efforts and contributions to the team without putting their careers in jeopardy. Hence, based on these premises, we hypothesize:

Hypothesis 2: Span of supervision is positively associated with social loafing via a) decreased supportive and b) decreased directive leadership.

Finally, our attention turns to the propensity to quit as a potential outcome arising from the interplay between the span of supervision and leadership. Prior research has illuminated that supportive leadership behaviors confer regular benefits upon followers, such as challenging assignments, flexible work schedules, feedback, recommendations, and acknowledgment. When leaders are perceived as providing such support, they tend to engender positive feelings and trust among their followers (e.g., Dirks & Ferrin, 2002), consequently reducing the inclination to quit. Supported followers are more likely to reciprocate the trust placed in them by demonstrating strong commitment, loyalty, and dedication (Yukl, 2013), which, in turn, diminishes their propensity to quit. In line with the social exchange framework (Cropanzano et al., 2017), a decline in directive and supportive leadership behaviors due to a broader span of supervision can impact individual leader-follower relationships. Followers may perceive decreased attention to their individual needs and a reduction in personalized interactions with their leaders, while leaders may have less frequent contact with followers and adopt a less sensitive interpersonal approach (Antonakis & Atwater, 2002). It is plausible that followers with strained relationships with their leaders would react more negatively to an expanded span of supervision than those with healthier relationships (Gottfredson & Aguinis, 2017), resulting in reduced enthusiasm for surpassing job expectations (Ballinger & Marcel, 2010). Empirical findings regarding the consequences of poor leader-follower relationships have revealed associations with high turnover intentions (Nishii & Mayer, 2009), heightened relational conflicts (Jehn et al., 1999), and diminished group cohesion and communication (O'Reilly et al., 1989). These negative group dynamics have been shown to elevate turnover rates in teams (Jackson et al., 1991; Wagner et al., 1984; Wiersema & Bird, 1993). Consequently, our hypothesis is as follows:

Hypothesis 3: Span of supervision is positively associated with propensity to quit via a) decreased directive and b) decreased supportive leadership.

3 METHODOLOGY

3.1 Setting and sample

Leaders (103) and followers (675) from Norwegian business organizations at different organizational levels (top, middle, and operational) contributed the data. After matching leader and follower responses, 640 observations were made. The respondents were recruited from 43 medium-to-large business organizations in various industries located in eastern Norway. Each group was formally and directly supervised by a given leader to achieve group goals. Groups varied in size, ranging from 2 to 40 followers, which enabled the study to test whether span of supervision of various sizes impacted the extent to which leaders actively applied supportive and directive behaviors. Data were mined from a business context to eliminate alternative sources of error variance.

Each organization provided information showing the organizational structure, the leaders and their followers, and access to both leaders' and followers' e-mail addresses. Each leader and all their followers were given a unique electronic access link to the questionnaires via *Confirmit.* Responses to the items were collected electronically. Participants completed the surveys during work hours. A covering letter confirmed data collection was conducted exclusively for academic research purposes with the goal of better understanding various aspects of team dynamics. Respondents were assured of the confidentiality of their responses and had not been compensated for their participation in the study. The response rate was nearly 75% based on 1,041 contacted individuals. The team leaders were predominantly male (66.5%), the average age was 41.7 years (SD = 7.4), and average education 15 years (SD = 2.4). Of the followers, 64.4% were male, the mean age was 43.1 (SD = 45.3), and the reported average education was 13.82 (SD = 4.8) years.

3.2 Measures

Followers rated leader supportiveness with four items taken from the LBDQ-XII (Stogdill, 1963) instrument (sample items: "My supervisor's relations with me can be described as friendly and approachable;" "My supervisor is concerned for my welfare;" anchors: 1 = Never, 2 = Seldom, 3 = Occasionally, 4 = Often, 5 = Always). Similarly, leader directiveness was measured with four items taken from the same instrument (sample items: "My supervisor schedules for me the work to be done;" anchors: 1 = Never, 2 = Seldom, 3 = Occasionally, 4 = Often, 5 = Always). Propensity to quit was measured with a five-item scale adopted from Wayne et al. (1997). (Sample items: "As soon as I can find a better job, I'll leave my present job;" "I am actively searching for another job in a different organization;" anchors: 1 = Strongly Disagree, 7 = Strongly Agree). Although the items of capturing supportiveness and directiveness are more than 80 years old, Judge, et al. (2004) concluded, 60 years after their development that LBDQ and LBDQ-XII were "the most valid measures across both factors" (p. 46).

As in the Liden et al. 2004 study, the leaders were asked to rate their followers' work performance, using a five-item performance rating scale developed by Liden and Graen (1980), (item stems: "Overall Present Performance;" anchors: 1 = Unsatisfactory, 7 = Outstanding). Responses to these five items were then averaged to provide a measure of performance for each subordinate. Furthermore, leaders reported span of supervision which was verified from a formal organizational chart. Finally, leaders provided an assessment of each follower on a social scale of four items adapted from Kidwell and Robie (2003). The measure examined the extent to which an individual tended to do less than his or her share of work when other employees were available. Sample items: "This employee takes it easy if others are around to do the work;" "This employee gives less than 100 percent effort;" anchors: 1 = Very Inaccurate, 7 = Very Accurate.

The questionnaires employed in this study were initially created in English. Given their intended application within a Norwegian context, a rigorous translation-back translation procedure was undertaken to ensure that the items retained their intended meanings, as recommended by Cavusgil and Das (1997) and Nachmias and Nachmias (1976). Subsequently, a pilot study was conducted to assess the instruments' functionality, the distribution process of the questionnaires, and the data collection protocol. This comprehensive pilot study aimed to identify and rectify any potential shortcomings in both the study's design and administration before the final deployment of the instruments.

3.3 Control variables

In this study, we controlled for various factors that could potentially impact both the independent and dependent variables, thus ensuring the exclusion of alternative explanations. This meticulous approach was informed by an extensive review of pertinent literature which unveiled several factors as possible influencers of the study variables. Notably, past research has indicated that respondents' age can account for some of the variance in ratings (Antonakis et al., 2004). Consequently, we meticulously examined data pertaining to the age of leaders, seeking to ascertain its potential significance in relation to the hypothesized associations. Moreover, we took leader education into account in our control measures, as it is reasonable to assume that an individual's ability to handle a broader span of supervision might escalate with enhanced

competence levels (Antonakis et al., 2004). Lastly, we also controlled for leader gender, recognizing that this demographic variable could wield influence over the development and utilization of supportive and directive leadership behaviors. By carefully controlling for these factors, we aimed to eliminate any spurious relationships that might emerge when scrutinizing the hypothesized connections within our study.

4 RESULTS

To investigate factor validity and to ensure the adequacy of our measurement model, a confirmatory factor analysis (CFA) was run. Specifically, the Weighted Least Squares Means and Variance (WLSMV) estimator of *M*plus 8.0 was used to take into consideration the nature of the ordinal data. In addition, because the reported data were nested and therefore not independent (i.e., some followers reported to the same leader), the "COMPLEX" feature of *M*plus was used, which includes an approach to handle the analysis of complex survey data where standard errors are computed using what is referred to as a "sandwich estimator." (Muthèn & Satorra, 1995). The residuals were not allowed to correlate.

The results of the CFA estimated using the features above suggested satisfactory model fit (χ^2 [266] = 540.88, $p < 0.01$; RMSEA = 0.039; CFI = 0.98; NNFI/TLI = 0.97). To ensure discriminant and convergent validity of the measurement model, alternative models were examined. Specifically, performed paired constructs tests (e.g. Farrell, 2010) (reported in Table 2) were performed and provided support for convergent and discriminant validity. For instance, the hypothesized five factor model displayed better fit indices than a four-factor model collapsing the items of directive and supportive leadership (χ^2 [270] = 690.98, $p < 0.01$; RMSEA = 0.048; CFI = 0.96; NNFI/TLI = 0.96) .Satisfied with the factorial validity of the measurement model the authors proceeded to estimate correlations before testing the hypotheses by adding the structural paths between the factors in a structural equation model (SEM). The descriptive statistics and correlations among the present study variables are provided in Table 1. As displayed on the diagonal of the table, the reliability estimates (coefficient alpha) for the multi-item scales were in an acceptable range for all variables of interest, ranging from .75 to .91.

Table 1: Descriptive statistics, correlations, and scale reliabilities

	Mean	*SD*	1	2	3	4	5	6	7	8	9
1. Span of supervision	13.03	9.71									
2. Leader education	14.82	2.59	-.33**								
3. Leader age	41.97	7.63	-.16**	-.01							
4. Leader gender	.25	.44	-.06	-.00	-.07						
5. Supportive leadership style	3.85	.70	-.22**	.05	.00	.03	(.80)				
6. Directive leadership	3.38	.61	-.21**	-.08*	.05	-.14**	.54**	(.75)			
7. Turnover intention	2.17	1.29	.03	.04	.02	.02	-.33**	-.26**	(.86)		
8. Performance	5.49	.99	-.25**	.01	.08*	.04	.33**	.14**	-.13**	(.91)	
9. Social loafing	2.52	1.43	.17**	-.09*	-.09*	-.11**	-.24**	-.05	.13**	-.74**	(.88)

$N = 778$. Cronbach alphas on primary diagonal; * $p < .05$; ** $p < .01$.

Note: Gender was coded such that "0" represents "men" and "1" represents "women"

Table 2: Results of confirmatory factor analyses

Model	Chi-square	*df*	RMSEA	CFI	TLI
Five factors	540.88	266	0.039	.98	.97
Four factors, collapsing directive and supportive leadership	690.98	270	0.048	.96	.96
Four factors, collapsing social loafing and intention to quit	1809.87	270	0.093	.87	.86
Three factors, collapsing work performance, social loafing and intention to quit	1956.71	273	0.096	.86	.85

Note. N = 640.

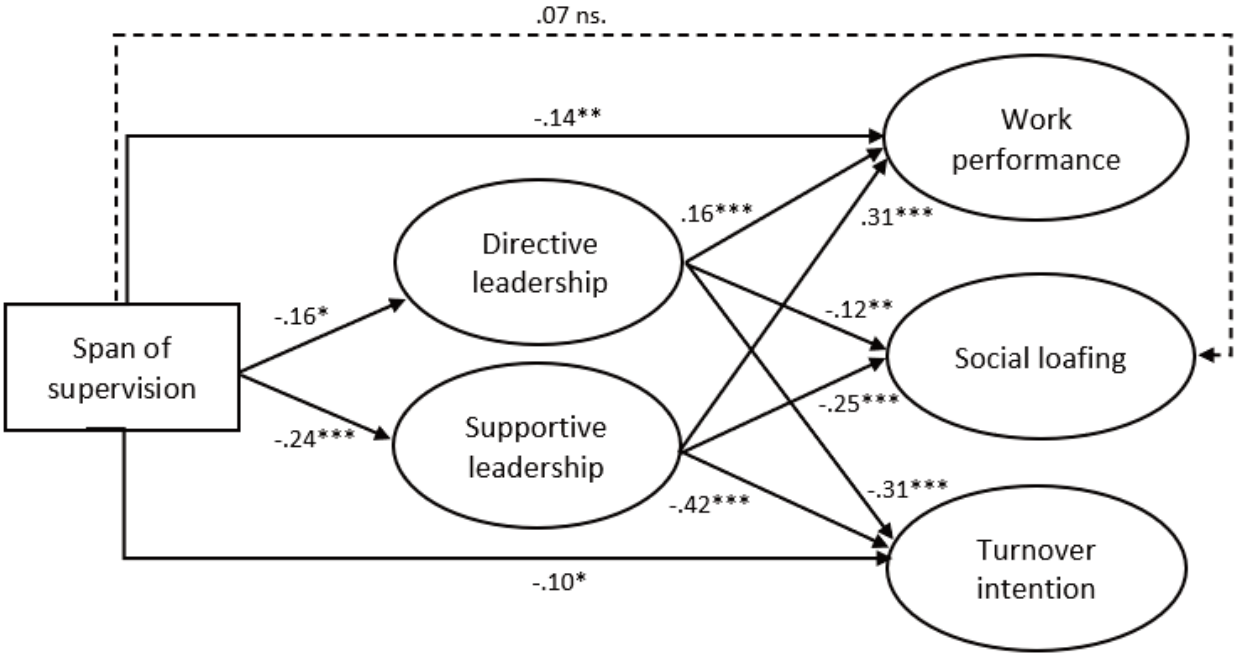
In line with expectations, descriptive statistics revealed that span of supervision was significantly and negatively correlated with supportive leadership style (r = -.22, p <.01) and directive leadership style (r = -.21 p < .01). In turn, supportive leadership correlated negatively with propensity to quit (r = -.33, p < .01) and social loafing (r = -.24, p < .01), and positively with leader ratings of performance (r = .33, p < .01). Similarly, directive leadership displayed negative correlations with propensity to quit (r = -.22, p < .01), while correlating positively with leader ratings of performance (r = .14, p < .01). Finally, the association between directive leadership and social loafing was not significant (r = -.05 *ns.*).

To formally test the hypotheses, a structural equation model (SEM) was estimated following the same procedures as for the measurement model. That is, the authors estimated a SEM accounting for the nested nature of the data by using cluster robust standard errors (COMPLEX), accounting for the ordinal nature of the data (WLSMV), and by controlling for sample heterogeneity (MIMIC) by regressing the factors onto the available control variables (Muthén, 1989) using the WLSMV estimator of *M*plus. As with the CFA, the residuals were not allowed to correlate. The SEM analysis to test the hypotheses also made use of the delta-method procedure in *M*plus (using the Sobel test). Research reviewed by Buch et al. (2015) suggests that the SEM approach is more reliable than the often-used causal-steps approach of Baron and Kenny (1986), since SEM estimates everything at the same time instead of assuming independent equations (Zhao et al., 2010). In addition, the causal-steps approach is limited since it does not provide a quantification of the indirect effect itself, and performs relatively poorly when it comes to statistical power (Fritz & MacKinnon, 2007).

The results of the SEM are shown in Figure 1. In accordance with predictions, the results demonstrated a negative relationship between span of supervision and both directive (γ = -.16, p < .05) and supportive (γ = -.24 p < .001) leadership styles. In turn, work performance was positively predicted both by supportive (β = .31 p < .001) and directive (β = .16 p < .01) leadership styles. Finally, we found negative relationships between supportive (β = -.42 p < .001) and directive (β = -.31 p < .001) leadership styles and propensity to quit, as well as negative relationships between supportive (β = -.25 p < .001) and directive (β = -.12 p < .01) leadership styles and social loafing.

The indirect relationship from span of supervision to performance via supportive leadership was significant (standardized indirect effect = -.07, p < .001), while the same indirect relationship via directive leadership yielded a non-significant relationship (standardized indirect effect = -.03 *ns.*). Accordingly, Hypothesis 1a, postulating that span of supervision is positively associated with individual performance via supportive leadership was supported, while Hypothesis 1b, postulating an indirect relationship from span of supervision to work performance via directive leadership was not supported, since the indirect effect was statistically significant for supportive leadership, but only not statistically significant with respect to directive leadership.

Figure 1: Structural equation model



$N = 778$. $^{*}p < .05$. $^{**}p < .01$. $^{***}p < .001$. Standardized path coefficients are reported.

A similar pattern emerged with respect to Hypothesis 2a, stating that span of supervision is positively associated with social loafing via supportive leadership, and Hypothesis 2b, directive leadership. Specifically, Hypothesis 2a was supported by the statistically significant indirect relationship via supportive leadership (standardized indirect effect = .10, $p < .001$), while 2b was not supported by the non-statistically significant indirect relationship via directive leadership (standardized indirect effect = .02, *ns*. Furthermore, the absence of a statistically significant direct relationship between the span of supervision and social loafing (γ = .07, *ns*.) indicates that the significant indirect relationship qualifies as an indirect-only mediation (Zhao et al., 2010). This implies that supportive leadership acts as a complete mediator in the link between the span of supervision and the occurrence of social loafing

Hypothesis 3, which stated that span of supervision is positively associated with propensity to quit via a) decreased directive and b) decreased supportive leadership, is fully supported by the statistically significant indirect relationships from span of supervision to propensity to quit via supportive leadership (standardized indirect effect = .10, $p < .001$) and directive leadership (standardized indirect effect = .05, $p < .05$).

5 DISCUSSION

The aim of the present study was to employ a rigorous empirical, theoretical and analytical approach to provide a better understanding of why varying levels of span of leader supervision leads to varying levels of productive and less productive, and even costly outcomes. In accordance with the study's intended contributions, the results aligned well with social exchange theory and empirically demonstrated antecedents, mediators and outcomes of factor relevant both theoretical and practical purposes in a non-technical manner to facilitate the readers understanding.

5.1 Theoretical implications

Our study significantly advances the scholarly understanding of the impact of supervisory span on leadership effectiveness, providing empirical evi-

dence that bridges a critical gap in existing literature. Despite the extensive body of research linking broader supervisory spans with adverse organizational outcomes, a nuanced exploration into the mechanisms by which supervisory span influences leadership style and effectiveness has remained largely uncharted. Responding to this deficiency, our research delineates how increased supervisory spans necessitate a recalibration of leadership behaviors, particularly in supportive and directive dimensions, thereby impacting team dynamics and performance.

Leveraging foundational frameworks such as social exchange theory, our findings offer a nuanced examination of the relationship between supervisory span and leadership behaviors. Empirically, we demonstrate that broader supervisory spans are inversely related to the efficacy of both directive and supportive leadership styles. This relationship is critical, as our analysis reveals that these leadership styles play a pivotal role in mediating the effects of supervisory span on key organizational outcomes, including employee performance, propensity to quit, and social loafing. Such insights underscore the need for leadership adaptations in response to expanding team sizes, emphasizing the strategic importance of flexible leadership approaches to maintain engagement and optimize organizational well-being.

Importantly, our research contributes novel insights into the dynamics of social loafing within larger supervisory spans, highlighting the indirect effect of supervisory span on social loafing through leadership styles. This finding enriches the theoretical conversation by illustrating how variations in leadership approach can either mitigate or exacerbate the challenges posed by wider spans of supervision. It signifies a profound theoretical advancement, urging a reevaluation of conventional leadership models to address the nuanced complexities introduced by larger team sizes effectively.

By elucidating the empirical linkages between supervisory span, leadership style, and organizational outcomes, our study responds to and advances Mueller's (2012) call for a deeper exploration into the interconnections among these variables. It not only enriches the theoretical landscape by offering empirical substantiation to theoretical propositions but also provides a solid foundation for future research aimed at unraveling the intricate mechanisms at play.

In summary, by providing a comprehensive analysis of how supervisory span influences leadership effectiveness and subsequent organizational outcomes, our research makes a significant contribution to the field. It not only deepens our understanding of the theoretical underpinnings of supervisory span's impact but also illuminates the path for practical leadership strategies conducive to robust team dynamics and organizational health. Our study stands as a testament to the critical need for leaders to evolve their styles and strategies, fostering effective leadership that ensures organizational resilience and success amidst the complexities of larger team sizes.

5.2 Practical implications

Our findings bear significant practical implications, offering invaluable guidance for organizational leaders and managers. Contemporary management trends continue to advocate for flatter organizational hierarchies across numerous industries and sectors (Zoller & Muldoon, 2020). This approach is characterized by a significant increase in the number of individuals under the supervision of a single leader. This trend is propelled by a multitude of factors, encompassing the imperative need for agility, swifter decision-making processes, and the amplification of employee empowerment. In the context of flatter hierarchies, the management structure features fewer tiers of leadership, and leaders are typically responsible for overseeing larger teams, consequently resulting in a larger span of supervision to each leader

The clear demonstration of the need for adaptive leadership strategies in the face of increased supervisory spans provides a roadmap for optimizing team structures and leadership approaches. This is crucial for enhancing overall performance and well-being, despite the inherent challenges associated with broad supervisory span.

Our research delineates a significant link between supervisory span, leadership behavior, and their consequent effects on organizational out-

comes. A pivotal takeaway for practitioners is the critical role of situational factors and the follower's individual characteristics in mediating these effects. Specifically, the level of task-related knowledge and experience among team members emerges as a key determinant in adapting leadership styles for optimal effectiveness (Thompson and Vecchio, 2009). Hence, leaders should recognize and leverage the expertise of mature team members who possess a high degree of task-related knowledge. Such employees may require less directive leadership and can significantly benefit from empowerment strategies that allow them autonomy in their work processes (Stewart et al., 2011). This approach not only capitalizes on their skills but also enhances their engagement and job satisfaction. Conversely, followers with less experience or maturity may thrive under more structured and directive leadership styles. These individuals benefit from clear guidance, support, and regular feedback to navigate their responsibilities effectively (Thompson & Glasø, 2018). By tailoring the leadership approach to match the maturity level of followers, leaders can ensure that all team members are supported in a manner that optimizes their performance and development.

The study also sheds light on the optimization of team structures in the sense that balancing breadth (number of subordinates) and depth (individual attention) ensures efficient management. Specifically, organizations should consider structuring teams into smaller, more manageable modules or sub-teams. This allows leaders to maintain a broader span of supervision at an organizational level while ensuring that each sub-team leader can provide adequate individual attention. Modular teams can improve coordination, increase focus on specific tasks, and enhance the quality of leader-follower interactions. In addition, leaders could adopt a multi-layered leadership approach where responsibilities are distributed among several leaders or managers at different levels. This not only alleviates the pressure on a single leader to manage a large number of direct reports but also ensures that leadership is more accessible and responsive to team members' needs.

Our research presents an intriguing finding that ties together the span of supervision, leadership behavior, and social loafing. The association between leadership behavior and social loafing underlines the importance of encouraging leaders to delegate responsibilities effectively and empower team members. This can reduce social loafing by fostering a sense of ownership and accountability among team members, even in larger teams. Also, building a strong team identity is a cornerstone of effective team management, directly impacting team cohesion, motivation, and overall performance. Enhancing team identity involves creating a shared sense of purpose, values, and belonging among team members, which can significantly mitigate social loafing.

5.3 Strengths, limitations, and directions for future research

It is essential to acknowledge the potential limitations of our current findings. In this study, we employed a cross-sectional research design to gather evidence supporting the proposed dynamics of leader-follower interactions. Although this methodology has faced criticism and is not without its drawbacks, it remains widely utilized in research. While some researchers advocate for longitudinal designs, highlighting their capacity to unveil causal relationships, it is worth noting that cross-sectional designs, as argued by Spector (2019), can still provide valuable evidence regarding associations among variables. They can also effectively mitigate many alternative explanations for these relationships by incorporating control variables and drawing on diverse data sources. To bolster the validity of our study, we incorporated several control variables aimed at eliminating potential confounding factors in our hypotheses. These variables included leader education, leader age, and leader gender. Furthermore, our data collection process involves multiple sources of information to ensure a comprehensive and well-rounded perspective. These sources encompassed (1) leader assessments of follower work performance and social loafing, (2) follower self-assessments regarding their propensity to quit and job satisfaction, (3) follower evaluations of leader directiveness and supportiveness, and (4) leaders reporting the number of members within each group, serving as a measure of span of supervision. By adopting this multifaceted approach and addressing these potential limitations, we aimed to enhance the robustness and reliability of our findings.

To minimize common method bias, leaders and followers were assured that their anonymity would be respected. According to Podsakoff et al. (2012, p. 888), such a guarantee can minimize common method bias by reducing the likelihood that respondents "edit their responses to be more socially desirable, lenient, acquiescent, and consistent with how they think the researcher wants them to respond."

As the span of supervision widens, the likelihood of positive interactions diminishes due to the increasing demands on leadership, which grow in number, complexity, and challenge. According to Hackman (2002), an alternative approach to effectively managing a large span of supervision involves establishing subgroups within the broader group. These subgroups, with their narrower spans of supervision, offer leaders greater opportunities to support their followers, enhance their competence through coaching and feedback, and foster more frequent and sensitive interpersonal interactions. This approach enables leaders to engage in behaviors that cultivate positive relationships with their followers, ultimately rendering their leadership more effective in improving performance, as noted by Gottfredson and Aguinis (2017).

In conclusion, our study has shed light on certain dysfunctional aspects associated with an expanded span of supervision. However, it is important to acknowledge a complex dilemma that adds nuance to our findings. When organizations opt to reduce the span of supervision in order to cultivate healthier relationships between leaders and their subordinates, this well-intentioned approach can inadvertently give rise to a potential increase in organizational hierarchy and the risk of excessive bureaucracy, along with a strict adherence to established rules and formal reporting structures. It is worth noting that this intricate dilemma was not within the scope of our present study. Nonetheless, we strongly encourage future researchers to delve deeper into this issue for a more comprehensive understanding.

In summary, our research makes a valuable contribution to the field of team dynamics by highlighting the pivotal role played by the span of supervision in shaping the connection between leader supportiveness, directive behavior, and team outcomes. Specifically, our findings underscore how variations in the size of supervision spans can significantly impact the degree to which leaders effectively employ both supportive and directive leadership behaviors. This, in turn, affects their capacity to foster meaningful social exchange relationships with all team members. We hope that our study serves as a catalyst for further exploration into the factors contributing to diminished individual performance within larger teams. By doing so, we aim to inspire researchers to develop actionable guidelines for mitigating these adverse effects and promoting more positive outcomes in team dynamics.

EXTENDED SUMMARY/IZVLEČEK

Ta študija se poglablja v zapleten odnos med hierarhično strukturo, ki jo predstavlja obseg nadzora, slogom vodenja in organizacijskimi izidi. Na podlagi sodobnega koncepta socialne izmenjave preučujemo, ali povečanje obsega nadzora spreminja dinamiko med vodjo in podrejenimi, saj omejuje vodje pri natančnem prilagajanju njihovih usmerjevalnih dejanj ter zmanjšuje priložnosti za podporo in pozitivno povratno informacijo, kar vodi do negativnih učinkov. Za preučitev tega smo analizirali podatke iz anket, v katerih je sodelovalo 103 vodij in 675 podrejenih iz 43 srednje velikih in velikih poslovnih organizacij, da bi razkrili pričakovane interakcije med različnimi dejavniki. Analiza s strukturnim enačbami (SEM), ob upoštevanju robustnih standardnih napak, je pokazala, da je večji obseg nadzora povezan z negativnimi učinki na vodstvene sloge vodij. Ti neugodni učinki so se nato povezovali z zmanjšano uspešnostjo zaposlenih, povečano pojavnostjo socialnega lenarjenja ter večjo verjetnostjo namere zapustiti organizacijo. Študija zato odpira kritična vprašanja o domnevni učinkovitosti organizacijskih sprememb, ki vključujejo širjenje vodstvenih odgovornosti. Ugotovitve poudarjajo potrebo po bolj prefinjenem razumevanju posledic hierarhičnih sprememb na dinamiko vodenja in organizacijske izide.

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