

The More the Merrier? An Exploratory Mixed Methods Study on Demands and Resources of Joint Leadership Duos in Part-Time

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Table of Contents

Abstract 4

The More the Merrier? An Exploratory Mixed Methods Study on Demands and Resources of Joint Leadership Duos in Part-Time..... 5

 Defining Joint Leadership Duos 7

 Defining Joint Leadership Duos in Part-Time..... 10

 Exploration of Joint Leadership Duos in Part-Time with JD-R Theory..... 10

 Leaders’ Job Demands and Job Resources 11

 Job Demands and Job Resources for the Leaders’ Work Environment 12

Method 14

 Procedure 15

 Sample 15

 Sample Interviews..... 17

 Sample Survey 17

 Measures 19

 Interview Scheme..... 19

 Demographics 20

 Survey 20

 Translation Process 20

 Analysis 20

Results 21

 Results Interviews..... 21

 Joint Leadership Duos in Part-Time 21

 Demands Interviews..... 23

 Resources Interviews 24

 Results Survey 34

 Demands Survey 34

 Resources Survey 37

 Demands vs. Resources as Reported in Survey 37

 Integration of Interviews and Survey Results..... 38

 Integration of Demands..... 38

 Integration of Resources 41

Discussion 43

 Joint Leadership Duos in Part-Time: Diversity in Overall Unity..... 44

Demands and Resources Central to Joint Leadership Duos in Part-Time.....	44
Central Demands.....	44
Central Resources	46
Demands and Resources for the Leaders' (Work) Environment.....	47
Aggregation of Demands and Resources into Higher Level Categories	49
Comparing Demands and Resources of Joint Leadership Duos in Part-Time	49
Implications	50
Limitations.....	52
Future Research	53
Conclusion.....	54
References	56
Appendix A	63
A1 Interview Scheme (American English).....	63
A2 Survey (American English)	64
A3 Interview Scheme (German).....	67
A4 Survey (German)	69
Appendix B	73
Table B1	73
Table B2	74
Appendix C	76
Table C1	76
Table C2	77

Abstract

Joint leadership duos in part-time as a specific leadership structure describe two leaders formally leading one team together while at least one of them is working part-time, sharing the same role, tasks, and responsibilities. This has been discussed as a potential solution to current labor market challenges such as gender diversity in management positions, lack of high qualified employees, sustainable HR management, increasing work-life balance for all genders, and increasing leader well-being and performance. Yet, research from occupational-health psychology remains scarce. Based on the job demands-resources (JD-R) theory, this mixed methods study explored job demands and job resources originating from this leadership structure for the involved leaders and their work environment. Integrating the results from 23 qualitative leader interviews with insights from a quantitative survey (N = 22 leaders), a final comprehensive list compiles 38 demands and 41 resources that leaders working in joint part-time leadership duos and their environments are likely to experience to varying extents. The study provides a potential higher-level categorization of those listed characteristics. Moreover, results indicated that resources are significantly more frequently experienced than demands, pointing to demands being experienced more punctually while resources are experienced more continuously. Central demands and resources mainly connect to previous research, especially regarding their potential impact on leaders' and their environment's well-being and performance. The study concludes with implications for research on joint leadership duos in part-time, JD-R theory, mixed-method studies, and for organizations in terms of HRM practices.

Keywords: joint leadership duos, part-time leadership, job demands-resources theory, mixed methods, leader well-being

The More the Merrier? An Exploratory Mixed Methods Study on Demands and Resources of Joint Leadership Duos in Part-Time

“I think it gives a lot, we are just two people, two brains. We always say we have four arms to embrace the organization. And one mission.” (Interview 21, 177-179)

“[It is] challenging indeed, much more challenging than I originally thought.”
(Interview 20, 81)

These quotes show that leaders of joint leadership duos in part-time experience both demands and resources originating from a unique leadership structure: *Joint leadership duos in part-time* describe two individuals formally leading one team together while at least one of them is working part-time, sharing the same role, tasks, and responsibilities (based on Döös & Wilhelmson, 2021; Dust & Ziegert, 2016; Karlshaus & Kaehler, 2023). Research, organizations and society discuss it as a potential solution to relevant labor market issues such as gender diversity in management positions, lack of high qualified employees, sustainable HR management, increasing work-life balance for all genders, and increasing leader well-being and performance (Karlshaus & Kaehler, 2023). So far, systematic data on the prevalence of joint leadership duos remains missing. However, the EU Labour Force Survey (LFS, 2022) provides data on part-time leadership. Across Europe, only 5.3% of all part-time positions are leadership positions. Yet, in most European countries, leaders report a desire for reduced working time (EU Labour Force Survey, 2021, as analyzed in Hipp & Stuth, 2013). Joint leadership duos in part-time may be an opportunity to enable part-time leadership, potentially increasing the number of diverse and high-qualified leaders, and leaders' well-being and performance (Hipp & Stuth, 2013; Karlshaus & Kaehler, 2023). Interestingly, research from an occupational health psychology perspective on demands and resources deriving from joint leadership duos in part-time and their impact on leaders' well-being and performance remains scarce.

So far, studies on two-leader structures and on part-time leadership reported mixed effects, indicating both advantages and disadvantages for the involved parties. Studies on related two-leader structures such as shared leadership (Rosengren & Bondas, 2010) or dual leadership (e.g., Thude et al., 2017) found advantages for organizations and leaders, for instance complementing competences (Klinga et al., 2016; Thude et al., 2017) and increased performance, job satisfaction or work-life balance (Rosengren & Bondas, 2010). However,

studies also found disadvantages such as incoherent opinions (Thude et al., 2017) and unclear leadership for followers (Rosengren & Bondas, 2010; Vidyarthi et al., 2014). Part-time leadership, defined as leadership positions with reduced working hours (compared to a full-time equivalent; Karlshaus & Kaehler, 2023; Rynek et al., 2022) is associated with similar contrasting findings for leaders and organizations. Advantages for leaders may for instance be increased work-life balance, life satisfaction, and work motivation, while the team can profit from higher team cohesion and autonomy (Karlshaus & Kaehler, 2023). Disadvantages can be workload and stress for the leader (Karlshaus & Kaehler, 2023) or team members' perceptions of lower professionalism (Rynek et al., 2022). Thus, joint leadership duos and part-time leadership both seem to yield positive and negative aspects for the people involved, especially for the leaders.

To enable an informed discussion of the combination of joint leadership duos and part-time leadership as a potential solution for the above-mentioned labor market challenges, more comprehensive knowledge about its advantages and disadvantages is essential. Until now, only a few, mainly economical or societal studies investigated two-leader structures explicitly discussing part-time models (i.e., at least one leader with reduced working time compared to a full-time equivalent; e.g., Himmen et al., 2023). Thus, research from an occupational health psychology perspective is overdue. Specifically, comprehensive knowledge about demands and resources that come with joint leadership duos in part-time is lacking. However, such knowledge is crucial for the theoretical understanding of the leadership structure, practical interventions, and for its consideration as a potential solution to current labor market challenges. Therefore, the present study aims to investigate the impact of joint leadership duos in part-time preliminary on the leaders' but also on their environment's job demands and job resources.

To advance the knowledge on job characteristics originating from joint leadership duos in part-time, the present study applied a mixed method approach (Stentz et al., 2012) drawing on the job demands-resource theory (JD-R theory; Bakker et al., 2023, Demerouti et al., 2001). JD-R theory allows to analyze joint leadership duos in part-time due to its clear specification of job characteristics into demands and resources (Demerouti et al., 2001). Its extension, multi-level JD-R theory allows for the analysis of job characteristics at multiple levels beyond just the leaders themselves, including their environment (e.g., subordinates; Bakker et al., 2023). Moreover, JD-R theory enables concrete insights for improving the leadership structure via interventions or personal development (Bakker et al., 2023; Tummers & Bakker, 2021). The study's mixed method design included both qualitative interviews and a

quantitative survey (Stentz et al., 2012). Leaders working in joint leadership duos in part-time reported demands and resources they experience in semi-structured interviews. Subsequently, they reported the frequency with which they experience specific demands and resources in a survey. Resulting data was integrated to enable a comprehensive analysis of demands and resources that come with joint leadership duos in part-time.

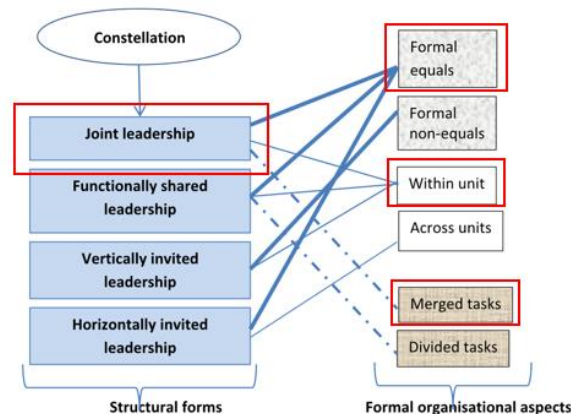
This study contributes to both research and practice in four important ways. First, the study contributes to research on leadership connected to JD-R theory by broadening the knowledge on relevant job characteristics and how they impact leaders' and their environment's well-being and performance (Bakker et al., 2023; Tummers & Bakker, 2021). Especially the application of JD-R theory to part-time work as a job characteristic has been rather neglected by research so far. Moreover, the discussion on job characteristics deriving from the leadership structure enriches the research on multi-level JD-R theory (Bakker, 2022; Bakker et al., 2023; Breevaart & Bakker, 2018; Costa et al., 2015; Fernet et al., 2015; Li et al., 2023; Wang et al., 2017). Second, the present study contributes methodologically to mixed methods application in leadership research (Stentz et al., 2012) by providing insights in a thorough integration of qualitative and quantitative data when exploring a yet understudied phenomenon. Third, the in-depth knowledge of job characteristics rooted in joint leadership duos in part-time contributes to applied research by offering opportunities to develop interventions for improvement, and to enhance HRM practices, such as job design, selection, performance evaluation, training and development (Bakker et al., 2023). Lastly, the present study contributes to the discussion on current labor market challenges. Detailed knowledge about joint leadership duos in part-time enables more thorough examination of its potential as a solution for problems such as diversity in management, or improved work-life balance, well-being, and performance of leaders (Karlshaus & Kaehler, 2023). Overall, the study explores job characteristics of joint leadership duos in part-time, deepens the theoretical and practical understanding of it, enhances the integration of leadership and JD-R theory, and opens possibilities for future research.

Defining Joint Leadership Duos

Joint leadership duos are defined as a leadership structure where a leadership position is shared between two individuals with shared tasks and responsibilities, complete role-enactment of both, leading one organizational unit (e.g., one team), while being equally designated by the organizational structure (Döös & Wilhelmson, 2021; Dust & Ziegert, 2016). This definition integrates the two frameworks of managerial shared leadership (Döös & Wilhelmson, 2021) and multi-leader teams (Dust & Ziegert, 2016).

Figure 1

Managerial Shared Leadership – Structural Aspects (Döös & Wilhelmson, 2021, p. 735)



Döös and Wilhelmson (2021), based on an extensive literature review, define managerial shared leadership “as an organizational phenomenon where a few individuals have and / or take mutual responsibility for the tasks included in holding a managerial position” (p. 717) using the term as a “main concept for sharing between managers” (p. 735). The authors differentiate their concept from shared leadership (e.g., Zhu et al., 2018) as the leaders sharing a leadership position do not include normal team members, but designated managers sharing leading tasks and responsibilities. The authors use three formal organizational aspects to differentiate between structural forms of managerial shared leadership: (1) *formal equality* vs. *non equality* referring to the leaders’ hierarchical order from an organizational perspective, (2) *within unit* vs. *across units* referring to the number of teams or departments (i.e., units) led by the leaders, and (3) *merged* vs. *divided tasks* referring to the task distribution among leaders. Based on this, Döös and Wilhelmson (2021) differentiate *joint leadership* as one structural form, characterized by managers with formal equality in terms of mandate, status, responsibility, power, and accountability, leading one unit with joint authority and merged tasks (see Figure 1). The authors consciously exclude number of managers as a defining aspect to keep their concept of managerial shared leadership flexible and open for various sharing constellations (Döös & Wilhelmson, 2021). Hence, to fully conceptualize the present phenomenon specifically focusing on two leaders, the present study adds the multi-leader team framework from Dust and Ziegert (2016).

Reviewing the multi-leader team literature, Dust and Ziegert (2016) establish a framework for multi-leader configurations based on two key dimensions: (1) the number of leaders within a team, and (2) the amount of overlap in those leaders’ role co-enactment. For the number of leaders within a team, the authors differentiate between configurations of all

team members, three or more team members, or two team members enacting as leaders. For the role co-enactment dimension, the authors differentiate between three configurations. First, complete role co-enactment describes a constellation where each leader participates in all leadership roles. Second, some role co-enactment describes constellations with some role overlap. Third, no role co-enactment describes constellations where leaders have unique non-overlapping roles. Based on their framework, Dust and Ziegert (2016) conclude nine different types of multi-leader teams as displayed in Table 1. The dual-comprehensive type describes the structure of joint leadership duos: Two leaders with complete role-enactment, meaning both individuals participate in all leadership roles.

Table 1

Overview Types of Multi-Leader Teams Based on Dust & Ziegert (2016)

		Leaders' role co-enactment		
		complete (= each leader participated in all leadership roles)	some (= some overlap in roles of each leader)	no (= leaders have unique non-overlapping roles)
Number of leaders within team (= amount of team members enacting as leaders)	all	multi-comprehensive	multi-partial	multi-independent
	three or more	limited-comprehensive	multi-partial	limited-independent
	two	dual-comprehensive	dual-partial	dual-independent

To establish a comprehensive concept of the investigated phenomenon with its defining characteristics (i.e., formal equality/complete role-enactment, merged tasks, leading one unit, two individuals sharing the leadership position) the combination of the two frameworks led to the term *joint leadership duos* (Döös & Wilhelmson, 2021; Dust & Ziegert, 2016). In this sense, *duos* refers to the fact that two individuals act as leaders (Dust & Ziegert, 2016), while *joint* refers to the fact that those two leaders are from equal formal hierarchy and therefore participate both in the overall leadership roles, while leading one team and sharing tasks (Dust & Ziegert, 2016). This decision enables the differentiation of other terms used in research for similar leadership structures. *Duo* as pointing to the characteristic of two leaders differentiates the joint leadership duo from other theories such as shared leadership (e.g., Zhu et al., 2018), managerial shared leadership (Döös & Wilhelmson, 2021), distributive

leadership (Pearce et al., 2009), or also collaborative leadership (e.g., Kramer & Crespy, 2011). The concepts of job sharing (e.g., Watton et al., 2019) and top sharing (e.g., Himmen et al., 2023) can be differentiated from joint leadership duos similarly, as they can also include more than 2 individuals within the sharing relationship. *Joint* points to the equal relationship of two leaders in terms of their role and responsibility, the sharing nature of tasks, and the aspect of leading one team (i.e., one unit) together. These characteristics contrast with other constellations described in literature that not necessarily include such equality or shared tasks, such as co-leadership (e.g., Gronn & Hamilton, 2004) or dual leadership (e.g., Järvinen et al., 2015).

Defining Joint Leadership Duos in Part-Time

One novel contribution of this study is the explicit focus on two leaders sharing a leadership position while working *part-time*. Part-time work per definition is a relative concept, referring to “a shorter than usual working time” (Karlshaus, 2020, p. 3). Although some sources define part-time employment with a fixed threshold (e.g., less than 30 hours a week; OECD Organisation for Economic Co-operation & Development, 2022b, as cited in Karlshaus, 2020), most sources acknowledge the relative nature. For instance, in the EU Labour Force Survey (LFS, 2022) employees assess their work time themselves based on the assumption that a part-time worker works less relative to a comparable full-time worker in the same position, occupation, organization, industry and country. In line with the International Labour Organization (ILO, 1994, as cited in Karlshaus, 2020) taking the comparable full-time standard is the best approach to consider the context as working hour standards vary not only across countries (Fagan et al., 2014), but even within organizations in one country (Karlshaus, 2020). Therefore, the present study applied this perspective and defines joint leadership duos in part-time as two leaders engaging in a joint leadership duo while at least one leader is working fewer working hours than comparable full-time leaders.

Exploration of Joint Leadership Duos in Part-Time with JD-R Theory

Job demands-resources theory (JD-R theory; Bakker et al., 2023) enables a thorough explorative analysis of joint leadership duos in part-time and their positive and negative effects on leaders' and their environment's well-being and performance. JD-R theory illustrates how job characteristics impact employee strain and motivation and subsequently their performance, as well as how employees shape this process proactively or reactively (e.g., via job crafting or self-undermining; Bakker et al., 2023). Due to its flexible characteristics, the theory gathers comprehensive research, supporting the relationships and processes stated by the theoretical framework (e.g., Bakker et al., 2005; De Jonge & Huter, 2021; Lavoie-

Tremblay et al., 2014; Lesener et al., 2019). In addition, the research community stated and researched theoretical enhancements and additions. For instance, the multilevel JD-R theory (Tummers & Bakker, 2021) describes trickle-down effects of leaders on employees (e.g., Bakker, 2022; Breevaart & Bakker, 2018; Costa et al., 2015; Fernet et al., 2015; Li et al., 2023; Tims et al., 2013). Moreover, the work-home resources model integrates spillover theories with JD-R theory (Ten Brummelhuis & Bakker, 2012) describing how demands and resources of both work and home can influence the respective other area (e.g., Aw et al., 2021; Du et al., 2020). Finally, from a practical perspective, JD-R theory provides specific insights for improvements and interventions at the workplace (Bakker et al., 2023). Such interventions can be implemented for better job designs, leadership, team or employee training, focusing on the relevant issue such as decreasing demands, increasing resources, supporting proactive and decreasing reactive behavior (Bakker et al., 2023; Tummers & Bakker, 2021). For this study specifically, JD-R theory is interesting and helpful as it allows an analysis of the leadership structure from different perspectives considering positive and negative aspects (Schaufeli & Taris, 2014; Tummers & Bakker, 2021).

Leaders' Job Demands and Job Resources

The present study focused on the analysis of the leaders themselves and the effect of the leadership structure on their individual job demands and job resources, influencing their well-being and performance (Bakker et al., 2023; Tummers & Bakker, 2021). *Job demands* are defined as job characteristics (i.e., psychological, social, physical, organizational) requiring long-term effort associated with physiological and / or psychological costs (Bakker et al., 2023). *Job resources* are defined as job characteristics (i.e., psychological, social, physical, organizational) that are motivating and helpful for goal achievement, regulating job demands and stimulating personal growth and learning (Bakker et al., 2023).

Previous studies on shared leadership structures with two leaders found job demands for leaders such as communication difficulties, imbalance, insecurity, and power conflicts (e.g., Himmen et al., 2023; Järvinen et al., 2015; Rosengren & Bondas, 2010). Simultaneously, research on part-time leadership found the same or similar demands for part-time leaders, such as communication difficulties, increased workload, threats for professionalism, confusion and unclear responsibilities, often resulting in higher stress (Karlshaus & Kaehler, 2023; Rynek et al., 2022). As joint leadership duos in part-time combine both aspects, job demands such as conflicts, communication problems, or role ambiguity seemed likely to occur. As this leadership structure, especially the explicit focus on

part-time work, has not been researched yet, the present study applied an explorative approach to clarify the field for future research (Stentz et al., 2012).

Research Question 1: What demands do leaders in joint leadership duos in part-time face?

Previous studies on shared leadership structures with two leaders also found job resources such as self-confidence, increased personal development, complementing competences, reciprocal support, higher resilience, and better work-life balance (e.g., Himmen et al., 2023; Järvinen et al., 2015; Rosengren & Bondas, 2010; Thude et al., 2017). Studies on part-time leadership found the same or similar resources such as better work-life balance or higher life satisfaction, resulting in higher work motivation (Karlshaus & Kaehler, 2023; Rynek et al., 2022). Based on this, and the characteristics of joint leadership duos in part-time, job resources such as reciprocal support, trust, self-confidence, more time for recovery and enhanced work-life balance seemed likely to occur.

Research Question 2: What resources do leaders in joint leadership duos in part-time gain?

Job Demands and Job Resources for the Leaders' Work Environment

Additionally, the present study analyzed the job demands and resources deriving from the leadership structure for the leaders' work environment, for instance their subordinates, colleagues, supervisors or organizations, influencing their well-being and performance (Bakker et al., 2023; Tummers & Bakker, 2021). Tummers and Bakker (2021) connect leadership and JD-R theory by introducing leadership "as a construct located on a higher level than the dimensions of JD-R theory" (p. 8). The authors define leadership as "an influencing process, specifically an intentional influence to guide, structure and facilitate others" (p. 3) and position it within JD-R theory in different ways. Here, the pathways of leadership directly impacting job demands, as well as job resources, were of interest. The overall impact of leadership in general for employees' and teams' well-being and performance was supported in several studies (e.g., Bellé, 2014; Chemin, 2021; Dvir et al., 2002; Judge & Piccolo, 2004). Therefore, it can be expected that joint leadership duos in part-time as a leadership structure also has effects on the leaders' work environment.

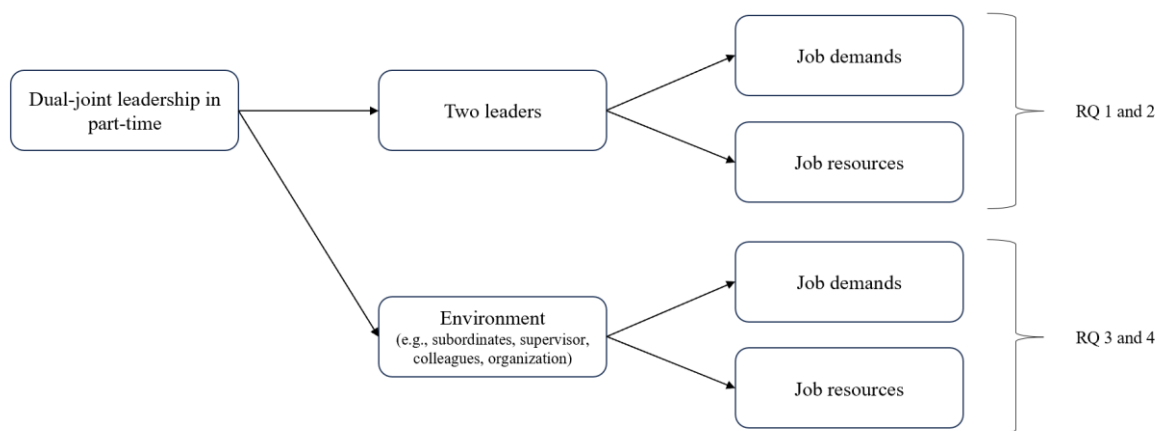
In line with previous research, indicating that leadership, shared leadership structures and part-time leadership can result in job demands for the leaders' environment, joint leadership duos in part-time may yield demands for the duo's environment. For instance, Molino and colleagues (2019) showed that destructive leadership is related to higher workload for the leaders' subordinates resulting in workaholism and exhaustion. Moreover,

research on joint leadership duos found that two leaders can lead to role unclarity as an additional demand for their subordinates (Rosengren & Bondas, 2010). The part-time component may lead to additional job demands such as higher workload for subordinates due to more delegated tasks (Karlshaus, 2020). Thus, it is likely that the leadership structure of joint leadership duos in part-time might lead to job demands for the leaders' work environment such as lack of clarity, power conflicts, confusion, or communication difficulties (e.g., Himmen et al., 2023; Järvinen et al., 2015; Karlshaus & Kaehler, 2023; Rosengren & Bondas, 2010; Rynek et al., 2022). Again, research on the leadership structure considering the part-time component and its effect on the work environment remains scarce. Hence, an explorative approach is chosen (Stentz et al., 2012).

Research Question 3: What demands come with joint leadership duos in part-time for the leaders' work environment (e.g., subordinates, supervisor, colleagues, organizations)?

Figure 2

Overview Research Model



Previous research also indicated that leadership, shared leadership structures and part-time leadership can result in job resources for the leaders' work environment, suggesting that joint leadership duos in part-time may yield resources for the duo's environment. For instance, transformational leadership reduced employees' job demands and increased their job resources which indirectly led to more positive work attitudes and higher job performance (Fernet et al., 2015). Additionally, support from the supervisor acted as a team job resource and increased performance through teamwork engagement (Costa et al., 2015). Thus, the work environment may profit from two leaders being able to provide more supervisor support than one leader alone. Moreover, such leadership duos might result in more leading

competences and balancing leadership behaviors (Antonakis & Day, 2018), less stressed and better recovered leaders and therefore less detrimental leadership behaviors and better leading performance (e.g., Klinga et al., 2016; Rosengren & Bondas, 2010; Tummers & Bakker, 2021), as well as higher autonomy and responsibility also for the team (Himmen et al., 2023).

Research Question 4: What resources come with joint leadership duos in part-time for the leaders' work environment (e.g., subordinates, supervisor, colleagues, organizations)?

To summarize, this study, based on JD-R theory (Bakker et al., 2023), aimed to explore which job demands and job resources come with joint leadership duos in part-time for leaders individually (RQ 1 and 2) and for their environment (RQ3 and 4). For an overview of the research model refer to Figure 2.

Method

This pre-registered study (OSF; <https://doi.org/10.17605/OSF.IO/XZU5M>) applied a cross-sectional exploratory mixed methods design, integrating qualitative and quantitative data (Stentz et al., 2012). The design included semi-structured interviews and a survey with leaders working in joint leadership duos in part-time. As leadership is a “complex, multi-level, and socially constructed process” (Gardner et al., 2010, as cited in Stentz et al., 2012, p.1173), methods investigating it as a phenomenon should account for this (Stentz et al., 2012). A mixed-method design profits from the strengths of both quantitative and qualitative data while accounting for their weaknesses, and enables a comprehensive, contextualized understanding of joint leadership duos in part-time (Creswell & Plano Clark, 2011; Stentz et al., 2012; Tummers & Bakker, 2021). Such understanding is especially crucial for scarce phenomena such as this leadership structure (e.g., EU Labour Force Survey LFS, 2022; Himmen et al., 2023; Hipp & Stuth, 2013). To account for this scarcity, an exploratory approach was valid (Stentz et al, 2012). The study applied a cross-sectional design neglecting any causal conclusions (e.g., Tummers & Bakker, 2021). This choice was based on the phenomenon's exploratory stage and feasibility reasons (i.e., the study project's limited sample and time frame; Creswell & Plano Clark, 2011; Stentz et al., 2012).

Specifically, the present study used a *convergent parallel design* (Creswell & Plano Clark, 2011). This included the collection of both quantitative and qualitative data at the study's same stage (concurrent timing), prioritizing them equally, keeping them independent, and only merging them during the results stage for overall interpretation (Stentz et al., 2012). The study used qualitative data from semi-structured interviews to explore the phenomenon of joint leadership duos in part-time as practiced in the field, while enriching the investigation

with quantitative data assessing factors stated in literature to be important (cf. Taylor et al., 2011).

Procedure

The study included two parts: First, semi-structured interviews (30 minutes) were conducted with one leader of a joint leadership duo in part-time based on an a-priori developed interview scheme (Appendix A1). The aim of the interview was to explore which job demands and resources leaders and their environment experience through this leadership structure. Interviews were conducted with one leader from a duo individually, due to the focus on individual experiences, practicability reasons, and to reduce social desirability biases (Himmen et al., 2023). Most interviews took place online using Zoom, Microsoft Teams and Webex. Two interviews were conducted via phone calls. All interviews were recorded upon consent and transcribed.

Second, after the interviews, a self-developed survey was sent to the interviewed leaders with an adapted list of job demands and resources based on previous research (Appendix A2; Marzocchi et al., 2024; Schaufeli, 2015; Schaufeli & Taris, 2014). Leaders were asked to also forward the survey to their leadership partners (i.e., the second leader of the joint leadership duo) and their subordinates to increase the sample and gain more perspectives. The survey assessed participants' demographics and frequency of demands and resources, stated in previous literature, as experienced due to the leadership structure. Results of both study parts were then integrated into a comprehensive picture of job characteristics originating from joint leadership duos (RQ 1-4; Stentz et al., 2012; Taylor et al., 2011).

Sample

The sample criteria were based on the theoretical framework of joint leadership duos in part-time (Döös & Wilhelmson, 2021; Dust & Ziegert, 2016; Karlshaus & Kaehler, 2023): Participating leaders shared one leadership position with shared tasks and responsibilities, leading one team, being formally designated as equal leaders by the organization and at least one leader working in part-time (i.e., less working hours than an equivalent full-time employee). Despite this, all genders, ages, countries, tenures, managerial levels, working hour models, kinds of organizations and sectors were included. The sample collection involved four approaches: through (1) research and direct contact on the online platform LinkedIn, (2) connections within personal networks, (3) flyers distributed on social media, resulting in proactive contact of leaders, (4) contacts from interviewed leaders. Participant communication included emails, messages and contact persons.

Table 2

Interview Sample Characteristics of Joint Leadership Duos in Part-Time as Described by Leaders (N=23)

Duo characteristic	Information from Interviews	
Subordinates (Count)	Minimum: 3 Maximum: 21	
Sectors (Count)	Business Sector	3
	Consumer Goods Sector	3
	FMCG Sector*	2
	Holding Sector	2
	Life Science	2
	Academia, Medical Sector, Mobility Sector, Politics Sector, Public Finance Sector, Public Sector, Public Services, Social Sector, Sport Goods Sector, Tech Sector, Water Supply Sector	1
Working Time (Duos)	Working time	- Both part-time (PT / PT): 20 - One leader part-time, one full-time (PT / FT): 3
	Percentage working time (100% = 1 FTE)	- Joint working hour percentage almost always over 100% together - Both leaders 60%: 7
	Working days per week	- Three days per week (one Monday to Wednesday and one Wednesday to Friday): 5 - Four days per week: 8
Gender	Interviewee	Female 19 Male 4
	Leadership Partner	Female 20 Male 3
	Pairings Leadership Duo	F / F 16 F / M 7 M / M 0
Tenure in current leadership duo in years	$M = 1.71$ $Min = 0.25, Max = 12$	

Note. *FMCG = Fast-Moving Consumer Goods

Subsequently, the interview sample was asked to answer the survey and forward it to their leadership partners and subordinates. The survey response behavior was not as expected.

Of 23 interviewed leaders suitable for analysis, 17 provided valid survey responses. Moreover, five additional leadership partners responded to the survey, resulting in overall 22 valid survey responses. Due to these overlapping but not identical samples for interviews and survey, these two groups are treated as distinct yet dependent samples in the following.

Sample Interviews

Among 25 leaders participating in an interview, 23 leaders met the final inclusion criteria. Two cases were excluded from further analyses as one leadership duo was not officially designated equally as leaders and in one leadership duo both leaders worked full-time. The final effective interview sample consisted of 23 leaders (four males, 19 females; 23 working in part-time; country of residence: 22 Germany, one Switzerland). Unfortunately, reporting the sample's age parameters is not possible, since respective interview data was incomplete, and interview and survey participants were not fully identical. The characteristics of the interviewed leaders' joint leadership duos in part-time are summarized in Table 2.

16 duos consisted of two female leaders, seven of one female and one male leader, and no duo combined two male leaders. 20 leaders worked in duos with both leaders working part-time, only three leaders worked in duos with one leader working part-time and one working full-time. Almost all duos worked more than 100% (i.e., one FTE) per week combined, for instance, seven duos consisted of two leaders working 60% each. The number of subordinates ranged between three and 21. Three leaders each worked in the public services and the mobility sector. Two leaders each worked in the public finance, the social and the sporting goods sector. On average, leaders reported a tenure of their current joint leadership duo of 1.71 years (0.25-12 years). The final sample size of $N = 23$ was slightly smaller than the initially targeted sample size of 25-30 leaders based on guidelines for qualitative research studies using qualitative interviews. However, the similarities and repetitions across interviews suggested data saturation (cf. Van De Wiel, 2017), supporting a sufficient sample size to provide valid insights for the research questions.

Sample Survey

The survey's initial target group was the interviewed leaders, their leadership partners and their subordinates. In total, 52 participants answered the survey. 11 participants were excluded from analysis due to incomplete participation (seven cases), non-agreement with data protection settings (two cases) as well as not meeting the sample requirements (two cases, described above). The resulting 41 valid participations included 17 interviewed leaders, five leadership partners and 19 subordinates. The number of subordinates was below the targeted cut-off point of 30 employees and mainly derived from two joint leadership duos,

diminishing the representativeness for both an employee level analysis (i.e., biased for team specific dynamics) and team level analysis (i.e., barely enough team units, cf. Santos et al., 2016). Therefore, this group of participants ($n = 19$) was excluded from the analysis. As the goal was to achieve insights into the individual experiences of leaders working in the leadership structure, both interviewed leaders ($n = 17$) and leadership partners ($n = 5$) were included (displaying only four couples, i.e., two leaders of one duo). Thus, the final effective sample for the survey consisted of 22 leaders (17 interviewed, five partners; four males, 18 females; age $M = 42.95$, $SD = 5.46$, 30-51; country of residence: 21 Germany, one Switzerland). The sample characteristics are summarized in Table 3.

21 surveyed leaders worked part-time and only one leader worked full-time. On average, leaders worked 28 hours per week ($SD = 5.93$, 14-29.5 hours), 67.5% ($SD = 14.43$, 30-90%), and 3.98 days per week ($SD = 0.85$, 2-5 days). On average, leaders reported 3.18 official overlap days per week (i.e., days both leaders are working together; $SD = 1.27$, 1-5 days), and 2.54 unofficial overlap days per week ($SD = 2.26$, 0-5 days). This small difference between official and unofficial overlap days indicated that leaders communicate or work with each other outside of their official working hours. Four leaders worked in an HR department, while the rest worked in a variety of departments, showing the leadership structure's occurrence across occupations, as also displayed for work sectors. Four of them each worked in the public services and social sector, three leaders in the mobility sector, and two in Academia. The rest worked in a variety of sectors. On average, leaders reported a tenure of working in this leadership structure of 2.98 ($SD = 2.58$, 1-12).

Table 3

Survey Sample Characteristics of Leaders in Joint Leadership Duos in Part-Time as Described by Leaders (N=22)

Characteristic	Information from Interviews	
Department	HR	4
	Legal Advice	2
	Early Childhood Support	2
	Competence Center Teaching	2
	Public Administration	2
	Digitalization	2
	Team Management, Sales, Operations, Logistics, HR	1
	Development, Corporate Affairs (Environment, Security, Health), Child- & Youth Politics, Central Emergency Room	
Sectors (Count)	Public Services	4
	Social Sector	4

	Mobility Sector	3
	Academic Sector	2
	Commerce, Conglomerate, Financial Services, FMCG, Medical Sector, Science & Technology, Sporting Goods, Transport & Logistics, Water Supply Sector	1
Working Time (Leaders)	Working time	- PT: 21 (95.4%) - FT: 1 (4.4%)
	Working hours per week	- $M = 28.01, SD = 5.93$ - $Min = 14h, Max = 39.5h$ - 24h per week: 27.3% - 30h per week: 18.2%
	Percentage working time (100% = 1 FTE)	- $M = 67.5\%, SD = 14.43$ - $Min = 30\%, Max = 90\%$ - 60% PT-work: 36.4% - 80% PT work: 13.6%
	Working days per week	- $M = 3.98, SD = 0.85$ - $Min = 2 \text{ days}, Max = 5 \text{ days}$ - 4 days per week: 40.9% - 5 days per week: 27.3% - 3 days per week: 22.7%
Overlap Days of leaders with each other	Official overlap days per week	- $M = 3.18, SD = 1.27$ - $Min = 1 \text{ day}, Max = 5 \text{ days}$ - 3 days per week: 27.3% - 5 days per week: 22.7% - 4 and 2 days per week: 18.2% each - 1 day per week: (13.6%)
	Unofficial overlap days per week	- $M = 2.54, SD = 2.26$ - $Min = 0 \text{ days}, Max = 5 \text{ days}$ - 0 days per week: 36.4% - 5 days per week: 27.3% - 4 days per week: 13.6%
Tenure in leadership structure in years	$M = 2,98, SD = 2,58$ $Min = 1, Max = 12$	

Note. *FMCG = Fast-Moving Consumer Goods

Measures

Interview Scheme

The semi-structured interview scheme (see Appendix A1) consisted of four core questions with potential probes (Van de Wiel, 2017) enabling both comparison and flexibility. The scheme starts broadly with “Please describe shortly your current leadership constellation

(your way of a joint leadership duo in part-time).” (Rosengren & Bondas, 2010) and then leads to more concrete questions such as “What demands do you experience in this leadership structure?”. The complete interview scheme consists of three main blocks: (1) duo and experience description, as well as (2) demands (3) and resources deriving from the leadership structure.

Demographics

The survey inquired age, gender, country of residence, work tenure in this leadership structure, department, sector, working time (part-time vs. full-time, working hours per week, percentage of part-time work, working days per week), and official and unofficial working days together (i.e., overlap days) with single items (see Appendix A2).

Survey

Based on extensive lists of job characteristics gathered in literature (Marzocchi et al., 2024; Schaufeli, 2015; Schaufeli & Taris, 2014), as well as previous research on similar leadership structures (e.g., Himmen et al., 2023; Järvinen et al., 2015; Rosengren & Bondas, 2010) a list of 27 job demands and 30 resources relevant to joint leadership duos in part-time evolved (see Appendix A2). Participants indicated the frequency of experiencing those job characteristics due to the leadership structure on a 5-point Likert scale ranging from 1 (*never*) to 5 (*always*) with an option to not specify (Schaufeli, 2015).

Translation Process

All measures were translated from the original American English version to a German version, to increase participation rates. A double-blind back-translation process was applied (Klotz et al., 2023). A German native speaker with C2 English level translated the original English version (Version 1) into a German one (Version 2). Then, a native English speaker with C2 German level, working as a translation expert, translated the German version back into a new English version (Version 3). A final comparison of versions 1, 2 and 3 with all translators resulted in a new final German version (Version 4). The final German version can be found in Appendix A3 (interview scheme) and A4 (survey).

Analysis

The mixed methods study design required both qualitative and quantitative analysis. The qualitative analysis for the interviews applied a thematic analysis following recommended steps (Braun & Clarke, 2006). The transcription of the interview recordings via Microsoft Word and a subsequent manual accuracy check with the original audio recording enabled data familiarization. Transcriptions aimed to be close to the verbal account to keep “its original nature” (Braun & Clarke, 2006, p. 88), using punctuation accordingly. Then,

transcripts were coded using MAXQDA, generating initial codes, collating and sorting those into themes, and reviewing, refining and naming these themes (Braun & Clarke, 2006). The analysis was oriented around overall themes originating from the research questions: Joint leadership duo in part-time information (e.g., sample characteristics, duo organization, emergence), demands, and resources. For each theme, the count of interviews mentioning it were included as frequency estimates. Lastly, the emerging themes were aggregated into higher-level categories for a better overview (Marzocchi et al., 2024; Schaufeli, 2015).

The quantitative survey analysis included descriptive and frequency analyses conducted with IBM SPSS Version 29. Participants had the option not to specify their responses. Those were coded as missing values to not affect the analysis. Moreover, a check for the statistical significance of descriptive differences required a paired samples t-test.

Finally, another qualitative analysis integrated the overall results from both interviews and survey using Microsoft Excel. Demands and resources from both sources were ranked separately according to the respective frequencies (interviews: count of interviews naming themes; survey: mean frequency values) and then compared, checking for consistencies, similarities and distinctions. Since the ranking lists originating from the interviews and the survey did not completely align but rather complement each other, statistical ranking order tests (e.g., Spearman's Rank Correlation and Kendall's Tau) were not applicable. A final qualitative analysis resulted in a final list of job characteristics with an attempt to weigh them according to their rankings as well as an aggregation of those characteristics into higher-level categories (cf. Marzocchi et al., 2024; Schaufeli, 2015).

Results

Results Interviews

The thematic analysis of 23 interviews resulted in qualitative information about joint leadership duos in part-time (i.e., emergence, organization), as well as 21 demands (Table 4) and 24 resources (Table 5).

Joint Leadership Duos in Part-Time

The qualitative information describing the different kinds of joint leadership duos in part-time showed that the phenomenon is as diverse as the names the participants themselves used for it: “co-leadership”, “leadership tandem” or “joint leadership”. The interviewed leaders reported diverse ways of the leadership structure’s *emergence*, more specifically how it was initiated: (1) a joint proactive application of the duo for a position that was originally specified for one person; (2) the duo was matched upon initiation of the employer; (3) initiation by one leader to extend their own leadership position into a leadership duo due to

changes in their personal life (e.g., birth of child). As motivation to engage in such leadership, one third of the leaders reported the better compatibility of work or career with private life (e.g., family). Other motivations were more sustainable job conditions, improving a leadership position with more capacities, or engaging in an interesting position. While eleven leaders experienced support from HR and/or their management, seven experienced resistance and critical voices questioning the practicability of sharing a leadership position, working part-time or both.

The leaders also reported different approaches to organize their leadership duo in terms of task and responsibility distribution, information sharing procedures, and substitution. For *task and responsibility distribution*, a mixture of distributing and sharing professional tasks, responsibilities and foci depending on urgency, presence, expertise, and organizational requirements was predominant. More than half of the leaders shared long-term and strategic tasks and responsibilities but distributed short-term projects and daily personnel management. 12 leaders reported sharing personnel responsibility equally, eight reported dividing it but align with each other. Equal shares of leaders reported diverse forms of organizing personnel management (e.g., feedback talks): sharing, distributing, alternating, and letting the subordinates decide with who they want to talk. The overall responsibility for the team both professionally and personnel-wise was shared in all cases.

Leaders described different *information sharing and handover procedures*. While more than half of them reported a dedicated handover day or meeting per week, a third reported daily contact routines at the end of a working day. One similarity across leaders was the use of technical media solutions such as shared online notes, to-do lists, e-mails and voicemails. The leaders also described diverse ways of organizing *substitution*. While almost half of them reported complete reciprocal substitution, many reported partial substitution, also involving others such as officially designated substitutes from the team or the team itself.

Lastly, the leaders reported various *interpersonal relations* within the duos. Most leaders described close and good relations with their leadership partners, in some cases calling each other “friends” and “working wives”. However, few leaders also described more distanced, only professional relationships: “Personally we get on well, but we wouldn't meet for a coffee after work or anything like that.” (Interview 5, 370)

Overall, most leaders described their experiences of working in a joint leadership duo in part-time positively, calling it “enriching” or the “ideal way of working”. However, some leaders also described it as challenging, referring to a misfit of leaders, competition within leaders or a sabotaging environment. Taking all these findings together, the interviews

displayed various forms of joint leadership duos in part-time. Interestingly, patterns of demands and resources still emerged across all kinds of this leadership structure.

Demands Interviews

Table 4 displays a list of all demands found across interviews. The list shows that the interviewed leaders reported a variety of demands with some being mentioned by almost all leaders (e.g., *coordination*) and some by only a few leaders (e.g., *expectation management with different stakeholders*). The most mentioned demands (i.e., mentioned by more than half (> 11) of the interviews) included the following: (1) *Abilities to manage duo's interpersonal requirements* referring to getting along well with each other within the duo but also personal abilities to share the stage, step back and give up control; (2) *Acceptance of environment* referring to dealing with critical voices and resistance from the duo's environment within their organization; (3) *Coordination* referring to organizing tasks and responsibilities, reported to be crucial but requiring time and effort; (4) *Communication* referring to open and honest communication within the duo but also good communication of the duo with their environment (especially regarding the duo's set-up); (5) *Discovery phase* referring to developing a good working set up with each other, reported to be crucial for fit to organizational and personal requirements, requiring time, trust, communication and effort; (6) *Balance homo- and heterogeneity in duo* referring to establishing a joint vision and joint values while considering and using aspects of heterogeneity strategically (e.g., ways of working, behavior, strengths, career goals).

Notably, most demands focused on the leaders individually (e.g., *abilities to manage duo's interpersonal requirements*) or the duo (e.g., *coordination*). However, the interviewed leaders also mentioned demands for the duo's environment. Many leaders reported that having two leaders at once can be *demanding for their subordinates, supervisors or colleagues* in terms of dealing with two personalities and perspectives. To not overwhelm others with their constant presence, more capacities and higher energy levels, leaders actively manage these aspects and their amount of input. Few leaders also mentioned structural demands such as the *representation in the organization's IT systems* or the *financial enablement by the organization*. In general, an aggregation of the demands into four higher level categories was possible (Table 4): *duo organization demands* (seven), *interpersonal demands* (four), *environmental demands* (five), and *organizational demands* (five).

Overall, it seems some demands were occurring for almost all joint leadership duos in part-time (e.g., *acceptance of the environment, coordination, communication*), while others were less common (e.g., *unclearly / confusion, managing personal insecurities*). Factors

influencing the occurrence of demands seem to originate at all levels: the leaders individually, the duo's dynamic, the team and task structure, and from the environment.

Resources Interviews

Table 5 displays a list of all resources found across interviews. The list shows that the interviewed leaders reported a variety of resources with some being mentioned by almost all leaders (e.g., *joint decision making*) and some by few or only one leader (e.g., *decreased fluctuation / more retention*). The most mentioned resources (i.e., mentioned by more than half (> 11) of the interviews) included the following: (1) *Joint decision making* as a possibility to discuss and be responsible together for (difficult) decisions, being able to make better and faster decisions; (2) *Possibility to consult with each other* as a safe space where topics, and evaluations can be discussed on eye-level; (3) *Different perspectives* enabling better evaluations, decisions and ideas; (4) *More capacities and power with two leaders* in terms of productivity and achievement, and in advocating for something; (5) *Reliable and easy substitution* for each other reportedly bringing the leaders relief, feelings of security, freedom and good recovery during off work time; (6) *Better compatibility of work and private life* (e.g., family) with higher flexibility in coordinating and balancing professional and private life; and (7) *Complementary knowledge, competences and experiences* as combining two different personalities and careers and the corresponding strengths strategically.

Interestingly, the leaders reported most resources not only as beneficial for themselves but also pointed out benefits for their environment. For instance, *joint decision making* was described as relieving for the leaders. However, the leaders also described it as a resource for better and faster decisions, beneficial for their environment (e.g., their organization, team). Another example was *reliable and easy substitution* described as a resource bringing relief and flexibility for the leaders, but also being beneficial for the organizations in saving costs and effort in case of absences.

Few leaders also mentioned resources being beneficial for team and employee management such as *better knowledge management & retention, decreased fluctuation / more retention* and *empowerment of juniors and part-timers in leadership positions*. In general, an aggregation of the resources into six higher level categories was possible (Table 5): *collaborative resources* (six), *work-life balance resources* (three), *support and substitution resources* (three), *developmental resources* (four), *organizational resources* (five), and *interpersonal and social resources* (three).

Table 4

List of Demands Based on Thematic Analysis of Interviews Ranked According to Frequency and Higher-Level Groupings Indicated. N=23.

Demand	Description (Combination Subcodes)	Count of interviews naming theme	Count of total codings	Grouping
Abilities to manage duo's interpersonal requirements	<ul style="list-style-type: none"> - Most important is a good interpersonal relationship: Two leaders have to get along well - Leaders' ability to share the stage, step back, give up control and reflect on themselves is essential - Competition should be prevented 	23	128	Interpersonal demands
Acceptance / Support of environment	<ul style="list-style-type: none"> - Acceptance & support of supervisor and / or organization essential - Equal acceptance of both leaders important - Dealing with critics towards leadership structure important (esp. complexity & part-time) - Important to proactively establish & maintain acceptance - In general: good acceptance 	20	98	Environmental demands
Coordination	<ul style="list-style-type: none"> - High requirement for (good) coordination - Requires time, effort & resources - Continuous reflection / modification necessary 	20	66	Duo organization demands
Communication	<ul style="list-style-type: none"> - Open, good & honest communication important - Important to communicate well to environment about set up 	18	36	Duo organization demands
Discovery phase: developing good working set up with each other	<ul style="list-style-type: none"> - Developing a good working set up is essential & requires time, trust, communication, effort - Working set up should fit organization and leaders have to personally adapt to it 	14	42	Duo organization demands

Demand	Description (Combination Subcodes)	Count of interviews naming theme	Count of total codings	Grouping
	<ul style="list-style-type: none"> - Important to manage balance between leaders in case of unequal preconditions in team / working hours - Helpful to get feedback from environment 			
Balance homo- and heterogeneity in duo	<ul style="list-style-type: none"> - Joint vision & values as base important - Homogeneity can be beneficial - Dealing with tensions originating from heterogeneity important - Active reflection on heterogeneity (ways of working, behavior, communication, career goals, etc.) important / strategically helpful (e.g., through analyses) - Also gender as heterogeneity 	12	38	Duo organization demands
Joint decision-making	<ul style="list-style-type: none"> - Joint decision making is required - Needs time, energy, more reasoning - Decisions must be represented by both leaders equally - Find way of deal with disagreements (e.g., compromises, testing one direction) 	11	16	Duo organization demands
Overtime work / Flexible working hours	<ul style="list-style-type: none"> - Leadership structure prone to overtime work / work outside of official working time (flexible working time) due to different reasons (e.g., workload, dedication) - Contact outside of working hours mostly not perceived as something bad - Self-management important 	11	49	Structural demands
Handover organization / Information sharing	<ul style="list-style-type: none"> - Information sharing is important - Continuous reflection on what is important to share and how 	10	36	Duo organization demands

Demand	Description (Combination Subcodes)	Count of interviews naming theme	Count of total codings	Grouping
	<ul style="list-style-type: none"> - Contact outside of official working hours possible for e.g., important / urgent tasks - Interpersonal vibrations / atmosphere important to share 			
(Lack of) Trust	<ul style="list-style-type: none"> - Trust is a central requirement for a successful leadership duo: both trust in person as well in their competences 	10	22	Interpersonal demands
Risk of Mummy Daddy Games / Playing leaders off against each other	<ul style="list-style-type: none"> - For prevention it is important to emphasize duo cohesion, communicate open & transparently, & establish formal equality - Helpful if subordinates are open towards leadership structure 	9	19	Environmental demands
Unclarity / Confusion	<ul style="list-style-type: none"> - Potential unclarity or confusion regarding responsibilities & set-up: important to clarify those 	8	11	Duo organization demands
Two leaders demanding for environment (e.g., subordinates, peers, supervisor)	<ul style="list-style-type: none"> - Environment has to deal with 2 perspectives & 2 personalities - Duo can overwhelm environment: more energy, covering more topics, continuous presence, asking more, etc. 	7	19	Environmental demands
Part-time challenges	<ul style="list-style-type: none"> - Pressure to prove performance in PT (possible) - Manage critical voices against PT - If one leader PT & other FT important to manage imbalance in presence / expectations etc. 	5	15	Structural demands
External appearance of leadership duo	<ul style="list-style-type: none"> - Balance between strong duo and individuals - Equal presence / visibility important 	4	14	Environmental demands

Demand	Description (Combination Subcodes)	Count of interviews naming theme	Count of total codings	Grouping
	<ul style="list-style-type: none"> - Consistency of duo - Consciousness about it 			
Manage personal insecurities / worries	<ul style="list-style-type: none"> - Regarding unequal preconditions in team, preferences of subordinates, exploitation of duo for own career, etc. 	4	8	Interpersonal demands
Structural representation in IT system	<ul style="list-style-type: none"> - Often not possible → work arounds necessary 	3	4	Structural demands
Financial set-up for organization	<ul style="list-style-type: none"> - More costs possible (e.g., 1,5 FTE) → has to be considered by organization 	3	3	Structural demands
Expectation management with different stakeholders	<ul style="list-style-type: none"> - Leadership duo confronted with high(er) expectations from environment: both have to be up to date always, can work more than one, etc. - Important to manage expectations within duo and from (different) supervisors 	3	5	Environmental demands
Further career development	<ul style="list-style-type: none"> - Leaders should consider that working in duo impacts further career choices / individual career plans should be discussed 	2	3	Structural demands
Demanding leadership partner	<ul style="list-style-type: none"> - Supporting leadership partner / managing disagreements and conflict requires extra resources 	1	2	Interpersonal demands

Table 5

List of Resources Based on Thematic Analysis of Interviews Ranked According to Frequency and Higher-Level Groupings Indicated. N=23.

Resources	Description (Combination Subcodes)	Count of interviews naming theme	Count of total codings	Grouping
Joint decision-making	<ul style="list-style-type: none"> - Leaders experience it as a relief to share the responsibility for (difficult) decisions, and to have the possibility to discuss & make decisions together - Leaders can make better and faster decisions together, and they can better explain, defend and argument for them 	19	60	Collaborative resources
Possibility to consult with each other	<ul style="list-style-type: none"> - The two leaders can consult with each other strategically, on different aspects, on eye level and in safe space to evaluate situations - Good and honest consultation is very valuable and enables better work quality 	19	57	Collaborative resources
Reliable & easy substitution	<ul style="list-style-type: none"> - The possibility to easily substitute for each other is experienced as a big relief and is connected to a strong feeling of security and freedom, enabling good recovery time off work, especially on vacation - Reliable, easy & fast substitution also very beneficial for organization and team: during whole year full substitution available 	16	50	Support and substitution resources
Different perspectives	<ul style="list-style-type: none"> - The different, complementary perspectives of two leaders enable better ideas, better decision-making, and considering different aspects - The different perspectives are helpful professionally and are beneficial for organizations, results & subordinates 	16	44	Collaborative resources
More capacities / more power with two leaders	<ul style="list-style-type: none"> - Two leaders come with more capacities to be productive, lead their team, participate in meetings, and achieve more, especially in complex topics. 	16	42	Collaborative resources

Resources	Description (Combination Subcodes)	Count of interviews naming theme	Count of total codings	Grouping
	- Two leaders more powerful in advocating for something in terms of being more persistent, but also complement each other in negotiations and discussions			
Better compatibility of work & private life / family	<ul style="list-style-type: none"> - Leader experience higher flexibility in coordinating both their work and private life in terms of family care, pursuing a secondary employment, or balance different interests - This results in higher employer retention of the leaders and for them being more balanced and happier persons 	15	37	Work life balance resources
Complementary knowledge, competences, experiences	<ul style="list-style-type: none"> - Two leaders with two different personalities and CVs cover more competences and perspectives than only one person, and can strategically use those differences - The combination of same values & vision with complementary personalities & competences is very strong. 	14	34	Collaborative resources
Reciprocal social support	- The two leaders can support each other in case of family care urgencies, they can take off / over tasks from each other, and support each other in case of demanding situations (e.g., important meetings, resistance to their work)	10	18	Support and substitution resources
Interpersonal good relationship in duo	<ul style="list-style-type: none"> - The leaders experience the ability to trust (on) each other as relief and a high rate of agreement makes the coordination easier. - A feeling of “Togetherness” increases the feeling of security and not being alone. - A professionally close relationship but privately more distant can also be a resource as having a healthy distance to work. 	10	14	Interpersonal and social resources

Resources	Description (Combination Subcodes)	Count of interviews naming theme	Count of total codings	Grouping
Possibility to pursue career with kids or part-time	- This leadership structure enables both leaders to be in a leading position & pursue a career, and at the same time care for kids or do part-time work	10	10	Work life balance resources
Constant Availability	- At least one leader is always available for the environment - Leaders are always informed about new developments & able to represent the team at all time	9	16	Support and substitution resources
Shared responsibility	- The leaders experience the shared responsibility within the duo as big relief, more security, as well as more fun	9	15	Collaborative resources
Possibility for joint and individual reflection	- The two leaders describe the possibility to reflect both jointly but also individually on both the duo and them as enriching and helpful - This is connected to the permanent feedback they receive through the close work with their leadership partner	9	12	Developmental resources
Advantages of having two supervisors (for subordinates)	- Subordinates can profit from two leaders with different personalities, experiences and perspectives in terms of professional guidance, fair feedback and constant availability	9	12	Interpersonal and social resources
More networks & connections	- Two leaders bring two networks & connections, which can be used strategically (“you get along well with this person, so you contact them & I contact the one I know”)	8	15	Interpersonal and social resources
Better recovery beneficial for both well-being & work	- The two leaders are more able to recover well from work in off-work time due to part-time component and shared responsibility, which	7	10	Work life balance resources

Resources	Description (Combination Subcodes)	Count of interviews naming theme	Count of total codings	Grouping
	leads to more energy and well-being, potentially preventing burnout symptoms such as exhaustion			
Direct feedback	<ul style="list-style-type: none"> - Through close work together in same role, direct feedback from leadership partner very valuable for personal development - Possibility to evaluate well situations and behavior together 	6	11	Developmental resources
Possibility to develop & grow personally	<ul style="list-style-type: none"> - Leadership duo enables strong personal development & growth through permanent feedback, through learning with and from each other (e.g., complementary competences), and also through continuous reflection 	5	9	Developmental resources
Better knowledge management & retention	<ul style="list-style-type: none"> - By discussing and handing over topics knowledge is made explicit and shared. Thereby it is possible to keep it more sustainable within the organization. 	3	3	Organizational resources
Better representation	<ul style="list-style-type: none"> - The leadership duo makes it possible to represent different disciplines at the same time, as well as to represent the team as a unit stronger externally 	2	2	Organizational resources
Empowerment juniors / part-timers (etc.) in leadership positions	<ul style="list-style-type: none"> - Young leaders or leaders in part-time can be encouraged to take on leading positions as they can profit of doing it with someone else, sharing the responsibility and support each other. 	2	2	Organizational resources
Possibility of junior / senior leader mentorship	<ul style="list-style-type: none"> - More junior leaders can profit from experience and knowledge of more senior leaders when building a leadership duo together 	1	2	Organizational resources

Resources	Description (Combination Subcodes)	Count of interviews naming theme	Count of total codings	Grouping
Decreased fluctuation / more retention (benef. for team & organ.)	- Leaders can stay longer within company as leadership fitting personal circumstances (e.g., family care) is possible.	1	1	Organizational resources
Proud of leadership structure	- Leaders experience pride regarding their professional leadership structure	1	1	Organizational resources

Overall, it seems some resources were occurring almost for all joint leadership duos in part-time (e.g., *joint decision making, possibility to consult with each other, different perspectives*), while others were reported less frequently (e.g., *better representation, proud of leadership structure*), similarly to the demands. Factors influencing the occurrence of resources seem to originate at all levels: the leaders individually, the duo's dynamic, the team and task structure, and from the environment.

Comparing the job characteristics, the leaders reported more resources than demands (24 vs. 21). Interestingly, there seemed to be more agreement between leaders regarding demands than for resources: While three demands were mentioned in over 20 interviews, the highest count for a resource was 19. However, the mean counts of interviews mentioning demands and resources are quite similar ($M_{demands} = 9.4$ vs. $M_{resources} = 9.0$). Thus, joint leadership duos in part-time seem to yield both demands and resources similarly.

Results Survey

The survey analysis included responses of 22 eligible leaders as described in the sample description. The results compiled an overview of mean frequencies (5-point Likert scale: 1 = never, 2 = rarely, 3 = sometimes, 4 = often, 5 = always) leaders indicated for each demand (Table 6) and resource (Table 7).

Demands Survey

Table 6 shows how frequently the surveyed leaders experience each demand on average. The leaders reported to experience the demand *communication* the most ($M = 3.55$, $SD = 1.30$), followed by *information sharing* ($M = 3.45$, $SD = 1.26$), *acceptance of environment* ($M = 3.45$, $SD = 1.18$), *alignment* ($M = 3.41$, $SD = 1.01$), *cooperation / collaboration* ($M = 3.36$, $SD = 1.59$) and *coordination* ($M = 3.23$, $SD = 1.02$). Despite *acceptance of the environment*, those are all demands that describe central aspects of managing the duo and its tasks and responsibilities.

Interestingly, the surveyed leaders reported to almost never or very rarely experience demands such as *lack of trust* ($M = 1.23$, $SD = 0.53$), *power conflicts* ($M = 1.32$, $SD = 0.65$), *power imbalance* ($M = 1.59$, $SD = 0.80$), *threats of perceived professionalism* ($M = 1.59$, $SD = 0.80$), *unclear tasks* ($M = 1.67$, $SD = 0.58$) and others that are often feared when discussing similar leadership structures (Lancefield, 2024). Curiously, on average, the leaders reported to experience demands never, rarely or sometimes and in few cases close to often ($M_{min} = 1.23$, $M_{max} = 3.55$), but not always. Thus, all demands listed in the survey seem to occur for leaders when working in joint leadership duos in part-time, but rather rarely and punctually.

Table 6

Mean Frequencies Surveyed Leaders Reported for Demands on a 5-Point Likert Scale (1 = never, 2 = rarely, 3 = sometimes, 4 = often, 5 = always). N = 22.

Demand	N*	Min	Max	Mean	SD
Communication	22	1	5	3.55	1.30
Information sharing	22	1	5	3.45	1.26
Acceptance of work environment	22	1	5	3.45	1.18
Alignment	22	2	5	3.41	1.01
Cooperation / Collaboration	22	1	5	3.36	1.59
Coordination	22	2	5	3.23	1.02
Complexity	22	1	5	3.18	1.22
Mental demands	20	1	5	3.10	1.07
Time pressure	22	1	5	3.09	1.11
Workload	22	1	5	3.00	1.20
Sustain heterogeneity (of the duo)	22	1	5	2.55	1.30
Emotional demands	22	1	5	2.55	1.14
Unfavorable work schedule	22	1	4	2.36	0.95
Emotional dissonance	21	1	3	2.05	0.67
Role ambiguity	22	1	3	2.05	0.84
Unclear responsibilities	21	1	3	2.00	0.71
Personal insecurity	22	1	3	1.91	0.53
Role conflict	22	1	3	1.82	0.73
Disagreements	22	1	2	1.82	0.40
Interpersonal conflict	22	1	3	1.77	0.69
Confusion	21	1	3	1.71	0.56
Lack of autonomy	20	1	3	1.70	0.57
Unclear tasks	21	1	3	1.67	0.58
Threats for perceived professionalism	22	1	3	1.59	0.80
Power imbalance	22	1	3	1.59	0.80
Power conflicts	22	1	3	1.32	0.65
Lack of trust	22	1	3	1.23	0.53

Note. *Leaders had the option to not specify frequency which was treated as missing values in the analysis. Accordingly, N per demand could vary from the original N=22.

Table 7

Mean Frequencies Surveyed Leaders Reported for Resources on a 5-Point Likert Scale (1 = never, 2 = rarely, 3 = sometimes, 4 = often, 5 = always). N = 22.

Resource	N*	Min	Max	Mean	SD
Trust	22	2	5	4.73	0.70
(Reciprocal) social support	22	3	5	4.59	0.59
Team cohesion	22	3	5	4.45	0.67
Balancing leadership behaviors	20	3	5	4.40	0.68
Use of skills	22	4	5	4.36	0.49
Complementary competences	22	2	5	4.36	0.79
Feeling of "Togetherness"	22	1	5	4.32	1.09
Perspective broadening	22	1	5	4.27	0.94
Joint decision-making	22	2	5	4.23	0.75
Higher resilience	22	1	5	4.23	1.02
Increase in motivation	22	3	5	4.23	0.61
Professional pride	21	3	5	4.19	0.75
Possibilities for learning and development	22	3	5	4.18	0.66
Continuity	18	3	5	4.17	0.51
Continuous learning	22	2	5	4.14	0.77
Accessibility	20	3	5	4.10	0.55
Job control / autonomy	21	3	5	4.10	0.63
Work-life balance	22	1	5	4.09	1.02
Task variety	22	3	5	4.09	0.75
Procedural fairness (fair processes)	19	3	5	4.05	0.85
Strategic planning	21	2	5	4.05	1.02
Direct feedback	22	1	5	4.00	0.98
Synergy effects	20	2	5	4.00	0.86
Increase in creativity	22	1	5	3.95	1.13
Gain in self-confidence	22	2	5	3.91	0.87
Recognition	21	2	5	3.86	0.85
Reciprocal coaching	21	2	5	3.86	1.06
Leisure time / time for recovery	22	1	5	3.77	1.07
Organizational justice	21	2	5	3.76	0.89
More capacities	22	1	5	3.64	1.09

Note. *Leaders had the option to not specify frequency which was treated as missing values in the analysis. Accordingly, N per resource could vary from the original N=22.

Resources Survey

Table 7 shows how frequently the surveyed leaders experience each resource on average. The leaders reported to experience the resource *trust* the most ($M = 4.73$, $SD = 0.70$), followed by (*reciprocal*) *social support* ($M = 4.59$, $SD = 0.59$), *team cohesion* ($M = 4.45$, $SD = 0.67$), *balancing leadership behaviors* ($M = 4.40$, $SD = 0.68$), *use of skills* ($M = 4.36$, $SD = 0.49$), *complementary competences* ($M = 4.36$, $SD = 0.49$) and others showing similar mean values. The high frequency of *trust* and (*reciprocal*) *social support* represent interpersonal resources of joint leadership duos in part-time. Other resources, leaders reported as experienced frequently such as *team cohesion* and *balancing leadership behavior*, represent resources not only for the leaders but also for their environment.

On average, the leaders reported to experience other resources less frequently, such as *more capacities* ($M = 3.64$, $SD = 1.09$), *organizational justice* ($M = 3.76$, $SD = 0.89$), *leisure time / time for recovery* ($M = 3.77$, $SD = 1.07$) or *reciprocal coaching* ($M = 3.86$, $SD = 1.06$). However, on average, also those resources were reported to be experienced sometimes or almost often. Overall, a different pattern is notable for resources than for demands: On average, the leaders reported to experience all resources listed in the survey at least sometimes, but mainly often and in few cases almost always ($M_{min} = 3.64$, $M_{max} = 4.73$), but not rarely or never. Thus, it seems that resources according to the surveyed leaders occur very frequently, almost continuously.

Demands vs. Resources as Reported in Survey

The interesting pattern displayed in the means of leaders experiencing demands rather punctually while experiencing resources more often was statistically tested for its significance. A paired samples t-test statistically compared the mean frequencies of the demands with the one of the resources. The mean value for demands was 2.40 ($SD = 0.57$) and the mean value for resources was 4.13 ($SD = 0.49$). Results indicated a significant and notable difference between demands and resources ($t(21) = -9.31$, $p < .001$, Cohen's $d = 0.87$), with demands showing smaller frequencies on average than resources. A post hoc power analysis (G*Power 3.1.9.7) with the acquired effect size of $d = 0.87$ ($N=22$, $\alpha = 0.001$) revealed a statistical power of the paired samples t-test of 0.99. This underlined the findings that on average, leaders experience resources originating from the leadership structure more frequently than its demands.

Integration of Interviews and Survey Results

The qualitative analysis, integrating interviews and survey, compared demands and resources originating from both sources for consistencies, similarities, and distinctions (see Appendix B). Consistent and distinct job characteristics were directly included in the final list. Similar characteristics were analyzed for their degree of similarity. The decision to either merge or include them separately derived from the specificity of the information they conveyed. Similar characteristics describing the same concept were merged and included in the final list as one. Rather distinct, but overlapping concepts were included separately, to keep valid information and enable more specific analysis.

The final list of demands and resources (Table 8) of joint leadership duos in part-time compiled 38 demands and 41 resources leaders reported to experience across interviews and the survey. Considering the rankings from the interviews (i.e., based on count of interviews mentioning characteristic) and survey (i.e., based on mean frequency values), the list attempts at weighing the demands and resources from more likely to be experienced to potentially likely to be experienced. In other words, some job characteristics seem to occur for almost all leaders working in joint leadership duos in part-time and their environment (e.g., *communication*), others seem only to occur in specific settings (e.g., *demanding leadership partner*). This does not display a statistically calculated rank order as the common tests do not apply (see Analyses).

Due to the sample and the study's focus on leaders, the list mostly includes demands and resources for the leaders individually. However, as mentioned above, the interviewed leaders described job characteristics that from their perspective and experience also affect their environment (partially or fully, e.g., *unclear / confusion* or *two leaders demanding for environment*). This information is included in the final list with indices indicating a (potential) relevance of the listed demands and resources for the leaders' environment.

Integration of Demands

While the survey based on literature compiled 27 demands (Table 6), the interviews resulted in a list of 21 demands (Table 4). Demands consistent across both sources and similarly ranked were *acceptance of (work) environment*, *communication* and *coordination* (including alignment). Thus, these three demands seem to be central. Other demands found in both sources were *information sharing* (including handover organization), *(lack of) trust*, *unclear / confusion* (unclear responsibilities, tasks) and *personal insecurities*. An interesting observation was the, on first sight contradicting, naming of the trust related demand. While the interview coding resulted in "*trust*" as a demand in terms of that trust is necessary and

crucial for a successful duo, the literature put the focus rather on the “*lack of trust*”. Both point to the importance of trust in joint leadership duos in part-time.

Next to these consistent demands, there were demands with similarities. The demand *abilities to manage duo’s interpersonal requirements* referring to the ability of leaders to share the stage, step back or get along well could be matched with several demands from literature: *disagreements, interpersonal conflicts, power conflicts, emotional demands, emotional dissonance* and *cooperation / collaboration*. Interestingly, while the theme deriving from the interviews rather described the demands for the leader as a person, the descriptions from literature rather focused on concrete situations as demands. This could mean that leaders do not experience situations per se as demanding, but rather perceive central demands to leaders personally to be able to get involved in such a leadership structure. However, as the concrete demands enable better analysis and provide more specific information, those demands were included in the final list. Other similar demands were (1) *workload* and *time pressure* (literature) and *overtime work / flexible working hours* (interviews), (2) *unfavorable work schedule* (literature) and *part-time challenges* (interviews), (3) *lack of autonomy* (literature) and partially *coordination* and *joint decision-making* (interviews; “You have to align with your leadership partner.”) and (4) *sustain heterogeneity of the duo* (literature) and *balance homo- and heterogeneity of the duo* (interviews). Depending on their degree of similarity, the final list included them as merged demands or separately (Table 8).

Lastly, there were demands mentioned in only one of the sources. Demands mentioned in literature but not occurring in the interviews were *complexity, mental demands, role ambiguity, role conflict, threats for perceived professionalism* and *power imbalance*. Demands derived from the interviews but not mentioned in literature before were *discovery phase (developing good working set up with each other), risk of mommy daddy games / playing leaders off against each other, two leaders demanding for environment, external appearance of leadership duo, expectation management with stakeholders, financial set-up for organizations, structural representation in IT systems, further career development* and *demanding leadership partner*. Most of the demands mentioned in only one source were also ranked lower. This suggests that those demands can occur, but do not necessarily have to as they seem to be more prone to predictors other than the leadership structure itself. A list of the described comparison is displayed in Appendix B (Table B1).

Table 8

Final List of Demands and Resources Integrated from Both Interviews and Survey Analysis.

Demands		Resources	
Most likely to be experienced			
Acceptance of work environment		Joint decision-making	E
Communication	E	Different perspectives	E
Coordination/Alignment	E	Possibility to consult with each other	E
Balance between homo- and heterogeneity in duo		More capacities	E
Information sharing	E	Synergy effects	
(Lack of) trust		Work-life balance/compatibility	
Unclear responsibilities	E	Complementary competences	E
Confusion	E	(Reciprocal) social support	E
Unclear tasks	E	Interpersonal good relationship (Trust)	
Personal insecurity		Constant Availability	E
		Feeling of "Togetherness"	
		Shared responsibility	
		(Better) Leisure time / time for recovery	E
		Higher resilience	E
		Reliable and easy substitution	E
More likely to be experienced			
Cooperation / collaboration	E	Direct feedback	
Disagreements	E	Possibilities for learning and development	
Interpersonal conflicts	E	Use of skills	
Emotional demands		Team cohesion	E
Emotional dissonance		Balancing leadership behavior	E
Overtime work		Accessibility	E
Time Pressure		Continuity	E
Workload		Procedural fairness	E
Flexible working hours		Possibility to pursue career with kids/part-time	
Part-time challenges	E		
Unfavorable work schedule			
Discovery phase: developing good working set up with each other	E		
Complexity	E		
Mental demands			
Potentially likely to be experienced			
Risk of Mummy Daddy Games /playing leaders off against each other		Professional pride	
Two leaders demanding for environment	E	Possibility for joint and individual reflection	E

External appearance of leadership duo		Decreased fluctuation / increased retention	E
Role ambiguity		Gain in self-confidence	
Expectation management with different stakeholders		Empowerment of juniors / part-timers in leading positions	
Financial set-up for organization	E	Strategic Planning	
Role conflict		Reciprocal coaching	
Structural representation in IT system often not possible		Possibility of junior / senior leader mentorship	
Further career development		Increase in motivation	
Demanding leadership partner		More networks & connections	E
Threats for perceived professionalism		Job control / autonomy	
Power imbalance		Better knowledge management & retention	E
Lack of autonomy		Task variety	
Power conflicts	E	Better representation	E
		Increase in creativity	
		Recognition	
		Organizational justice	E

Note. The list is sorted based on integrated rankings (for interviews based on count of interviews mentioning characteristic, for survey based on mean frequency values) but does not display a statistical ranking order. The potential relevance for the leaders’ environment (E) is visualized after each job characteristic, based on interview insights.

To provide a better overview of demands that are relevant to the leadership structure, the integrated demands could be grouped into four higher-level categories, including demands with all levels of likelihood. Most demands belonged to the category of *duo organization demands* (15; including *communication, coordination, or discovery phase*), followed by *structural demands* (nine; including *part-time challenges or structural representation in IT systems*), *interpersonal demands* (eight; including *(lack of) trust, disagreements, or emotional demands*), and *environmental demands* (six; including *acceptance of work environment or two leaders demanding for environment*). A full list of the higher-level categories and respective demands is displayed in Appendix C (Table C1).

Integration of Resources

While the survey based on literature compiled 30 resources (Table 7), the interviews resulted in a list of 24 resources (Table 5). Resources mentioned in both sources were *joint decision-making, different perspectives, work-life balance / compatibility, complementary competences, (reciprocal) social support, direct feedback, and professional pride*. Thus, these resources seemed to be central for leaders in joint leadership duos in part-time. On first sight,

there seems to be less consistency between the rankings for interviews and the survey. However, it is important to note that the frequency means in the survey did not show big differences among resources: The first 23 resources (out of 30) ranged between $M = 4.00$ and $M = 4.73$. Thus, the rankings of resources originating from the interviews and the one from the survey did not differ as much as the plain ranking might suggest (for instance, joint decision-making on first spot in interviews vs. ninth one in survey).

Next to those consistent resources across sources, there were resources with similarities. For instance, the resource *constant availability* from interviews could be matched with *continuity* and *accessibility* from literature. However, *continuity* from literature could also be matched with *decreased fluctuation / more retention* from interviews. Similarly, *accessibility* overlapped with *advantages of having two supervisors* from interviews, next to *balancing leadership behavior*, *perspective broadening* and *procedural fairness*. Moreover, similarities could be found for instance for the resources *feeling of "togetherness"* (literature) and *shared responsibility as relief and security* (interviews), for *empowerment of juniors and part-timers in leadership positions* (interviews) and *gain in self-confidence* (literature), or also for *more capacities / more power with two leaders* (interviews) and *synergy effects* (literature). Again, depending on their degree of similarity the final list included them as merged demands or separately (Table 8). Curiously, trust, as the resource with the highest mean across survey responses, did not emerge as an independent resource in the interviews. This may be the case since the interviewed leaders perceived trust as a preconditional demand of the leadership structure. They did not mention it as a resource that helps them do their job better or reduces stress. Instead, they pointed out the whole interpersonal relationship as an important resource, including but not limited to trust.

Lastly, there were many resources mentioned only in either interviews or literature. Resources mentioned in literature but not occurring in the interviews were *team cohesion*, *use of skills*, *increase in motivation*, *job control / autonomy*, *task variety*, *increase in creativity*, *recognition* and *organizational justice*. Resources derived from the interviews but not mentioned in literature before were *reliable and easy substitution*, *possibility to pursue a career with kids or in part-time*, *more networks and connections*, *better knowledge management and retention*, and *better representation*. Most of them were ranked lower, suggesting that they were occurring more punctually and less continuously. A list of this comparison is displayed in Appendix B (Table B2).

Again, to provide a better overview of resources that are relevant to the leadership structure, the integrated resources could be grouped into six higher-level categories, including

resources with all levels of likelihood. Most resources belonged to the category of *collaborative resources* (13; including *joint decision-making* or *possibility to consult each other*), followed by *support and substitution resources* (nine; including *(reciprocal) social support* or *reliable and easy substitution*), *developmental resources* (six; including *direct feedback* or *possibilities for learning and development*), *organizational resources* (6; including *decreased fluctuation / increased retention* or *better representation*), *work-life balance resources* (four, including *(better) leisure time / time for recovery* or *possibility to pursue career with kids / part-time*), and *interpersonal and social resources* (3; including *interpersonal good relationship (trust)* or *more networks and connections*). A full list of the higher-level categories and respective resources is displayed in Appendix C (Table C2).

Discussion

This study, based on JD-R theory (Tummers & Bakker, 2021), explored job demands and job resources of *joint leadership duos in part-time* (Döös & Wilhelmson, 2021; Dust & Ziegert, 2016; Karlshaus & Kaehler, 2023) for the involved leaders and their environment. The study applied a mixed methods design (Stentz et al., 2012) integrating qualitative data from 23 interviews and quantitative data from 22 survey responses. These overlapping but not identical samples consisted of leaders working in the leadership structure. They reported job characteristics they experienced in interviews and rated the frequency of how often they experienced job characteristics mentioned in previous literature in a survey.

The results compile various exploratory insights. First, both interviews and the survey underlined the diverse forms of the leadership structure in its emergence (e.g., initiated by the duo vs. by the employer) and organization (e.g., tasks distributed vs. shared). Second, interview analysis generated a list of demands and resources, highlighting the most frequently mentioned ones across interviews (e.g., demands: *abilities to manage duo's interpersonal requirements, acceptance / support of environment*; resources: *joint decision-making, possibility to consult with each other*; Tables 4 and 5). Third, survey results reported mean frequencies of experiencing demands and resources from previous literature, highlighting the most frequently experienced ones (e.g., demands: *communication, acceptance of work environment*; resources: *trust, (reciprocal) social support*; Tables 6 and 7). Interestingly, survey analysis showed a statistically significant difference between frequencies reported for demands and resources. On average, demands were experienced less frequently than resources, pointing to a beneficial impact of the leadership structure. Fourth, a final list of 38 demands and 41 resources relevant to the leadership structure evolved from an integration of interviews and survey results (Table 8). The list attempts to weigh the job characteristics in

their likelihood to occur based on ranking interview and survey results separately, also considering relevance for the leaders' environment. Lastly, higher-level categories provide an aggregation of the final demands and resources for a better overview (Appendix C).

Joint Leadership Duos in Part-Time: Diversity in Overall Unity

The first finding of this study is the diversity of forms of joint leadership duos in part-time within a certain unity (cf. Himmen et al., 2023). While the duos differ in their emergence and organization, there is still a common core to all of them as they are defined: Two individuals formally leading one team together while at least one of them is working part-time, sharing the same role, tasks, and responsibilities (Döös & Wilhelmson, 2021; Dust & Ziegert, 2016; Karlshaus & Kaehler, 2023). The different forms of such duos may impact the occurrence of certain demands and resources for a specific duo. For instance, whether a duo was initiated by the duo itself (i.e., a joint application) or by the employer (i.e., merging two teams) may determine the level of acceptance and support of the leaders' work environment. Moreover, it shows the variety of contexts this leadership structure is and can be applied to. This is especially interesting since most of previous literature focused on very specific sectors, mainly health care (e.g., Gibeau et al., 2020; Klinga et al., 2016; Rosengren & Bondas, 2010; Thude et al., 2017) and art sectors (e.g., Bhansing et al., 2012; Järvinen et al., 2015). The present study, similar to the study of Himmen et al. (2023), extends the lens on the phenomenon, showing that it is not limited to specific sectors or contexts but can rather be found in a variety of forms, supporting the generalizability of the results.

Demands and Resources Central to Joint Leadership Duos in Part-Time

The most central finding of the study's analyses is a broad overview of demands and resources relevant to joint leadership duos in part-time - some of those seem to be experienced more often than others. The integration of findings from both interviews and survey (Stentz et al., 2012) resulted in central job characteristics (Table 8), occurring in more than half of the interviews and being rated as most frequently experienced in the survey.

Central Demands

The central demands align with previous research on similar shared leadership structures or part-time leadership. *Acceptance of (work) environment* was mainly found in studies investigating shared leadership structures (e.g., Döös & Wilhelmson, 2021; Himmen et al., 2023). Interestingly in this study, leaders specifically mentioned the importance of acceptance towards the part-time aspect: "Especially if they are very performance-oriented people, it can be, yes, you're now working part-time, you're no longer a real leader. And that's a problem." (Interview 15, 229-233). Thus, this demand seems to be twofold for leaders of

joint leadership duos in part-time. The environment's acceptance of both the duo (i.e., two leaders sharing a position) and the part-time aspect is crucial for favorable working conditions and a related increase in leaders' well-being and performance (Schaufeli & Taris, 2014).

Another central demand is *communication*, described in previous research on both shared and part-time leadership (Döös & Wilhelmson, 2021; Himmen et al., 2023; Järvinen et al., 2015; Karlshaus & Kaehler, 2023; Rosengren & Bondas, 2010; Schaufeli, 2015; Vidyarthi et al., 2014). As communication aims at creating "a shared reality" (Hackman & Johnson, 2013, p. 6) between two or more parties, it seems logical that this process is especially important when two parties share a leadership position. Communication enables the exchange and discussion of information, coordination of tasks and responsibilities, and development of a shared understanding and vision between two leaders, and between a leader duo and its environment (Hackman & Johnson, 2013). Or as an interviewee put it: "And we always say that a basic requirement for the model in any case is that you have to communicate a lot." (Interview 17, 81). Communication requires time and effort, potentially increasing workload which can induce stress on leaders (Bakker et al., 2005; Marzocchi et al., 2024). Thus, beneficial communication seems to be crucial to account for the additional effort necessary in joint leadership duos in part-time (Bakker et al., 2023).

Coordination (incl. alignment) evolved as a central demand also, aligning with previous research on both shared and part-time leadership (Döös & Wilhelmson, 2021; Karlshaus, 2020; Rosengren & Bondas, 2010; Schaufeli & Taris, 2014; Watton et al., 2019). When considering the dictionary definition of coordination as "the act of making all the people involved in a plan or activity work together in an organized way" (Cambridge University Press, n.d.) it seems clear why this demand is central for joint leadership duos in part-time. The two leaders must work together in an organized way to establish shared leadership. Again, coordination might induce additional workload on leaders as it requires time and effort, which in turn can increase stress (Ilies et al., 2010; Marzocchi et al., 2024).

The other more central demands across interviews and survey align with previous research too: *Information sharing* (incl. *handover organization*) (Rosengren & Bondas, 2010; Thude et al., 2017), *(lack of) trust* (Döös & Wilhelmson, 2021; Watton et al., 2019), *uncertainty / confusion* (Döös & Wilhelmson, 2021; Karlshaus & Kaehler, 2023; Rosengren & Bondas, 2010; Schaufeli & Taris, 2014; Vidyarthi et al., 2014), and *personal insecurities* (Döös & Wilhelmson, 2021).

Central Resources

The central resources align with previous research on similar shared leadership structures or part-time leadership. *Joint decision-making* as commonly mentioned across previous research (Himmen et al., 2023; Karlshaus, 2020; Schaufeli, 2015; Schaufeli & Taris, 2014) seems to be one of the most common resources leaders in this leadership structure experience. In line with literature, leaders in this study described it as a resource as it enables better, more considered and faster decisions, as the following two quotes show: “All important decisions, we look at them together. And that means there is quality assurance within the model.” (Interview 13, 167-173), “One advantage is that we can make decisions much faster. So, I'm faster in my decision-making processes because I can quickly throw them back and forth in ping pong with [my leadership partner].” (Interview 7, 231). Moreover, leaders experience joint decision-making within the leader duo as a relief:

Align with each other and then not having to think afterwards, alone at home like, was that the right decision or not, but simply to think, yes OK, we decided it together and now we can stand up for it together, I find that very relieving. (Interview 2, 113)

I managed a unit on my own and sometimes found it difficult when you're very alone with the decisions, of course you can ask your own supervisor or discuss it with a colleague at the same level, but it's not the same as being [in a duo]. (Interview 3, 59)

Thus, joint decision-making might decrease leaders' work-related rumination, shown to be detrimental for employees' recovery resulting in higher levels of fatigue (Querstret & Cropley, 2012). Hence, joint decision-making might increase leaders' well-being by reducing work-related rumination.

Another central resource is *work-life balance/compatibility*, congruent with previous research on both shared leadership structures (Döös & Wilhelmson, 2021; Watton et al., 2019) and part-time leadership (Karlshaus, 2020). Joint leadership duos in part-time enable leaders to better integrate their work and private life. This might reduce work-family conflict and with that strain-related outcomes (e.g., Mauno et al., 2006). Thus, this can be beneficial for leaders' life satisfaction and happiness (Schaufeli & Taris, 2014), not only being beneficial for the leaders' well-being and performance, but also for their work and private environment: “It just makes me a happier, more balanced person and that helps the whole family system.” (Interview 13, 61). Moreover, this aspect makes joint leadership duos in part-time an interesting opportunity to increase gender equality in society and leadership positions (Karlshaus & Kaehler, 2023). It enables women to take over leadership positions, but it also supports men in participating more in family care (Himmen et al., 2023). Thus, this resource

is not only beneficial for individual leaders in terms of well-being, but also for organizations and societies in terms of sustaining and maintaining high-qualified employees and establishing gender equality (Karlshaus & Kaehler, 2023).

Complementary competences is another central resource, which previous literature has been discussing extensively (Himmen et al., 2023; Järvinen et al., 2015; Rosengren & Bondas, 2010; Thude et al., 2017; Watton et al., 2019). According to an interviewee, leaders of one duo can complement each other as they have different educational backgrounds: “So simply the CVs, [the leadership partner] has experienced completely different things in her life and has acquired completely different competences than me.” (Interview 16, 225-229). This resource was described to increase the duo’s performance and capacities (cf. Ensley et al., 2006): “In other words, we simply have the chance to often say, do you want to do this because it's something you know well or are good at, or should I do it because I have this connection.” (Interview 21, 173). Moreover, leaders described this resource as relieving as they could distribute tasks according to their strengths and preferences reducing unliked tasks:

[The leadership partner] really likes doing certain tasks that I always hated and I don't have to do them anymore because she just does it and she likes doing it so much [...] and that also makes your life easier because you can concentrate much more on things that you like doing. (Interview 23, 137-139).

This points to a potential for job crafting inherent to the leadership structure. Job crafting describes the employee’s action to arrange their job demands and resources more beneficial to better align their job design with their abilities and preferences, shown to improve employees’ work engagement, performance and well-being (Bakker et al., 2023).

The other more central resources across interviews and survey align also with previous research: *different perspectives* (Gibeau et al., 2020; Himmen et al., 2023; Thude et al., 2017), *(reciprocal) social support* (Klinga et al., 2016; Schaufeli, 2015; Schaufeli & Taris, 2014), and *direct feedback* (Himmen et al., 2023; Marzocchi et al., 2024; Schaufeli & Taris, 2014).

Demands and Resources for the Leaders’ (Work) Environment

All the above-described demands and resources are mainly focusing on the leaders working in the leadership structure. However, those and others can also be demands and resources for the leaders’ environment (e.g., subordinates, colleagues, supervisors). For instance, the demands *communication*, *coordination* and *information sharing* can be more demanding with two leaders than with only one, depending on the respective leadership duo set-up (e.g., Döös & Wilhelmson, 2021; Thude et al., 2017):

For one person it is really difficult, I think she would prefer a simpler assignment, I take my tasks from one person and that is also the one person with whom I have my feedback discussions, [...] she would probably use the word clarity and I would perhaps use the word unambiguity. So now, when she heard one thing, I think she has the feeling that she has to hear the other opinion and divide it by two and then somehow come to a result that is unambiguous for her. (Interview 21, 213-219)

This quote also points to the demand *unclarity/confusion* (Döös & Wilhelmson, 2021; Karlshaus & Kaehler, 2023; Rosengren & Bondas, 2010; Schaufeli & Taris, 2014), that can impact especially subordinate's well-being (Schaufeli & Taris, 2014). Another demand for the leaders' environment, mentioned by several interviewed leaders, was the for subordinates, colleagues and supervisors potentially overwhelming energy and power of the duo due to longer and better recovery times and more capacities, not yet discussed in literature: "The other thing we have learned is that although speed is good in some situations, it can also be overwhelming. That means, we've learned to consciously slow down the pace. Because we can of course act much faster." (Interview 22, 91-93)

Additionally, resources, such as *joint decision-making* and *complementary competences* can be beneficial for the leaders' environment. As mentioned, *joint decision-making* (Himmen et al., 2023; Karlshaus, 2020; Schaufeli, 2015; Schaufeli & Taris, 2014) can advance the quality and pace of decisions from which the whole work environment can profit (Himmen et al., 2023). *Complementary competences* (Himmen et al., 2023; Järvinen et al., 2015; Rosengren & Bondas, 2010; Thude et al., 2017; Watton et al., 2019) and *different perspectives* (Gibeau et al., 2020; Himmen et al., 2023; Thude et al., 2017) can also be beneficial for the leaders' environment, especially the subordinates, as they profit from enriched input and guidance:

It's of course also valuable for our team members, they of course like the fact that they have a choice, that they get two perspectives in these feedback and goal-setting talks. The world is totally complex, there are different perspectives. And the people who work with us also get two perspectives. A flower bouquet of what you can do or how you can see different things. (Interview 19, 101-103)

Overall, many job characteristics initially focusing on the individual leaders can also impact the leaders' environment (Tummers & Bakker, 2021). Unfortunately, only having leaders as source of information in this study limits the findings' significance on demands and resources for the leaders' environment.

Aggregation of Demands and Resources into Higher Level Categories

Like previous literature, this study also aggregates the final job characteristics into higher-level categories (Marzocchi et al., 2024; Schaufeli, 2015; Appendix C). These categories describe the job characteristics' focus (e.g., *duo organization demands*, *collaborative resources*). Contrasting to previous categorization of demands into qualitative and quantitative demands (Schaufeli, 2015), this does not determine the data type for investigating a characteristic. For instance, work overload could still be examined quantified with overtime hours, but also qualitatively focusing on a person's subjective perception. Moreover, the chosen categories here do not group demands into challenge, hindrance, or threat demands, as Marzocchi and colleagues (2024) did. While this kind of categorization can be insightful, further research would be needed to do so for this present phenomenon, as for some demands the allocation would not be clear based on the present data. For instance, communication was described to be hindering when requiring too much time and effort, but also positively challenging when discussing different perspectives.

Lastly, the present categorization leaves room for different levels where both demands and resources can be of impact (e.g., leader, duo, subordinates, organization). When reviewing the rankings of demands and resources per high-level categories, *duo organization demands* and *collaborative resources* include most of the demands and resources that are most likely to be experienced (7 demands, 8 resources). *Environmental demands* and *organizational resources* are the categories with the most demands and resources that are only potentially likely to be experienced (5 demands, 6 resources). This makes sense, as *organizational demands* and *collaborative resources* are more inherent to the leadership structure (i.e., a duo / part-time) itself, while environmental and organizational job characteristics depend also more on other factors than the duo itself.

Comparing Demands and Resources of Joint Leadership Duos in Part-Time

Overall, interviewed leaders reported more resources than demands (24 vs. 21), and surveyed leaders reported to experience resources significantly more than demands. It is important to note that leaders reported to experience demands. However, those demands seemed to occur more punctually, especially in the initial phase of new joint leadership duos in part-time (Himmen et al., 2023). For instance, the acceptance of the environment might be especially demanding in the beginning, but it may be possible to improve it through communication and transparency (cf. Himmen et al., 2023). Thus, it seems that demands can be dealt with successfully through establishing a good set-up (Bakker et al., 2023) and / or with fitting personal characteristics (e.g., the ability to share the stage; Himmen et al., 2023).

Leaders even transferred aspects of demands into resources: they linked demands of *communication* and *coordination* closely to the possibility to consult with each other, which they reported to experience as an important resource and relief, beneficial for their performance and well-being (Bakker et al., 2023; Himmen et al., 2023):

When we go outside, we're always reflected on things once already, because whenever there are important topics, important decisions, of course we always put our heads together and talk about it again, and of course anyone else can't do that, because otherwise I'd be doing it all on my own and so I always have [my leadership partners'] opinion, their assessment, and I'm definitely in a broader position, because of course questions [...] can be illuminated differently. (Interview 12, 105-107)

That the surveyed leaders experienced resources significantly more often than demands, supports that leaders experience resources more continuously than demands. Thus, the resources of joint leadership duos in part-time for the involved leaders, but also their environment, may outweigh the demands of this leadership structure (Himmen et al., 2023).

Implications

Theoretically, the present study contributes to leadership theory providing insights into a yet understudied leadership structure. Specifically, the combination of joint leadership duos with part-time leadership is novel. The results show how diverse this leadership structure is present in practice (e.g., different working hour models; Himmen et al., 2023). Moreover, this study connects the leadership structure with both traditional and multi-level JD-R theory (Bakker et al., 2023; Tummers & Bakker, 2021), broadening the knowledge on job characteristics. It supports and adds to previous found job characteristics in literature (e.g., Marzocchi et al., 2024; Schaufeli, 2015), providing a comprehensive list of relevant job characteristics, discussing potential implications for leaders' and their environment's well-being and performance. This study contributes to leadership and (multi-level) JD-R theory (Tummers & Bakker, 2021), by showing that leadership can create and influence job characteristics for the involved leaders, but also top-down for subordinates, or bottom-up for supervisors. Overall, this study contributes to research investigating leadership and (multi-level) JD-R theory, and relevant constructs, processes and implications (Bakker et al., 2023).

Methodological implications derive from insights into a mixed method design applied for a thorough exploration of an understudied phenomenon (Stentz et al., 2012). This practical example of a mixed methods design, enabling the analysis and integration of both qualitative and quantitative data, contributes to the visibility and practicability of such designs, supporting their benefits to research across disciplines (Creamer & Reeping, 2020).

Last, the study contributes to practice and applied research twofold: First, knowledge about specific job characteristics provides opportunities to develop interventions to improve HRM practices such as job design, selection, training and development, and performance management (Bakker et al., 2023; Marzocchi et al., 2024). Thus, the insights enable the enhancement of joint leadership duos in part-time. For instance, organizations should provide duos with coaching and support during their initial development phase, (Himmen et al., 2023; Marzocchi et al., 2024) to set the base for a successful duo within the first months:

But we really put a lot of time in at the beginning to sort ourselves out, to get to know each other and to understand what is important and how do we want it and what is the standard we want to live by, and then we put a lot of time into getting our stakeholders on board and explaining that. [...] That totally helps still. (Interview 23, 217-219)

Especially good selection and a good match of the leaders of a duo emerged to be crucial. Most leaders mentioned personal characteristics, such as the abilities to share the stage, step back or give up control as crucial for working in this leadership structure.

Similarly, the importance of the two leaders getting along well was emphasized by leaders:

A final learning from us is that all roles can be done in job sharing, but not every person, every personality profile is suitable for job sharing. I think that would be our central message to our HR. That you have to look very carefully at who is trying to match with each other. (Interview 16, 320-322)

A second practical implication targets the discussion of joint leadership duos in part-time as a potential solution for labor market challenges, such as gender diversity in management positions, lack of high qualified employees, sustainable HR management, increasing work-life balance for all genders, and increasing leader well-being and performance (Karlshaus & Kaehler, 2023). This study's results indeed indicate this leadership structure to be a promising solution to those challenges when implemented thoughtfully (Himmen et al., 2023). The interviewed leaders explicitly mentioned resources pointing to relevant aspects in this regard: (1) the possibility of high qualified employees to remain in leadership positions despite being privately engaged (e.g., child or relative care); (2) the possibility of training and empowering younger leaders using existing talent; (3) the possibility of building junior and senior mixed leadership duos to ensure maintaining the implicit experience and knowledge of senior leaders; (4) the possibility of more sustainable HR management through increased retention stabilizing teams, careers, and organizations; (5) the possibility of increasing leaders' well-being and performance by providing better work-life balance, recovery and leisure time; and (6) the possibility of establishing gender equality

in society by supporting more women in leadership positions, and more men in family care work (Karlshaus & Kaehler, 2023; Watton et al., 2019). All this together, as well as the more frequent experience of its resources compared to its demands, underline the potential of joint leadership duos in part-time as a solution for current labor market challenges. Thus, the present study encourages organizations to consider this leadership structure as a serious option while providing valid insights into concrete aspects for its implementation.

Limitations

The present study comes with several, mainly methodological limitations. First, the sample consisted mostly of leaders working in successful duos. In fact, most leaders were convinced of the leadership structure, engaging in activities to promote and support it externally (e.g., as authors, coaches). Thus, the sample was liable to a bias reporting the leadership structure more positively. However, the following study aspects mitigate this bias: (1) While only one case out of 23 reported difficulties from their current joint leadership duo in part-time, several leaders reported experiences of less successful duos both experienced themselves with other leadership partners or witnessed with other duos. This underlines the leaders' awareness of and willingness to report potential difficulties of the leadership structure. (2) Probes used during the interviews encouraged leaders to report demands (Van De Wiel, 2017), explaining demands as something not per se negative to reduce resistance to report those. (3) The results underline that all leaders reported demands similarly to resources (21 vs. 23 in the interviews, Table 4 and 5), showing their willingness to talk about demands of joint leadership duos in part-time.

A second limitation is the solely German speaking sample, with all but one leader working in Germany. This limits the cross-cultural generalizability of the study (Schimmelpfennig et al., 2024). However, generalizability across sectors, departments, and team constellations is given (Table 2 and 3). Still, translation processes within the analysis might potentially have influenced the results (i.e., German speaking interviews into English themes; Klotz et al., 2023). In some cases, this was indeed notable: For instance, while the (English) literature mentioned both *coordination* and *alignment* as separate demands, the analysis of the interviews resulted in one overarching theme of *coordination*. In German speech commonly one word is used for both (i.e., *Abstimmung*). Two study aspects mitigated this potential influence: (1) The initial double-blind back-translation process of the measures (see Methods) provided a valid translation for job characteristics used as an orientation in the subsequent analysis. (2) The awareness of this potential bias enabled a proactive and thorough consideration of language and translation during the analysis.

Third, inconsistent samples (i.e., out of 23 interviewed leaders only 17 responded to the survey, plus 5 leadership partners resulting in 22 survey responses) and with that inconsistent sample characteristics (Tables 2 and 3) complicated data analysis and results reporting. In future mixed methods studies it is recommendable to prevent this by ensuring consistent participation across methods and structured acquisition of demographic data within qualitative methods (i.e., interviews).

A fourth methodological limitation is the exclusive use of self-reports measures, prone to common-method bias (e.g., Bakker et al., 2023). Self-report measures are not truly objective. However, they enable the investigation of subjective experiences, aligning with this study's aim. Additionally, the mixed method approach can reduce common-method bias by combining two different measures, enriching a phenomenon's analysis (Stentz et al., 2012).

A last limitation is the limited significance of results on demands and resources for the leaders' environment due to leaders being the central source of information. In fact, leaders mainly reported on job characteristics relevant to themselves, but also commented on those relevant for their environment, resulting in preliminary insights (Table 8). However, reports of the environment, for instance of subordinates directly would be more insightful. Unfortunately, the insufficiently representative participation of employees prevented such analysis. Future research is recommendable in this regard to enrich the knowledge on job characteristics for the duo's work environment.

Future Research

The present study encourages various future research. First, the final list of job characteristics coming with joint leadership duos in part-time for leaders and their environment (Table 8) calls for further investigation. Future research should examine these demands and resources in more comprehensive samples (i.e., of leaders, subordinates, colleagues, supervisors) to distinguish more precisely between them in terms of their relevance, frequencies and predictors. Moreover, future research should research specific job characteristics, their predictors and moderators, but also their explicit effects on leaders' and their environments' well-being and performance (e.g., Bakker et al., 2023; Tummers & Bakker, 2021). Thus, this exploratory study encourages more directed, confirmatory research to enrich both theory and practice.

Second, future research should investigate more specific job demands and resources of joint leadership duos in part-time specifically evolving for their environment, for instance their subordinates, colleagues, supervisors but also their organizations as well as potential clients or patients. This would not only broaden the perspective on this leadership structure,

but also contribute to the integration of leadership and (multi-level) JD-R theory (Bakker et al., 2023; Tummers & Bakker, 2021). Potential relationships could be investigated, such as how the implementation of this leadership structure influences organizational culture, or how subordinates are affected by the fact of being led by two leaders jointly with a part-time component (e.g., in negotiation situations). Moreover, other higher-level categorizations could be examined. Overall, there are several interesting and relevant questions open to dive into.

Last, future research is required to enrich and refine the picture on job characteristics of joint leadership duos in part-time by using diverse data – data from different sources, different cases, and different contexts. For instance, objective organizational data could extend the picture of such duos, such as team performance measures, retention and absenteeism rates, or data of interactional sociolinguistics (Vine et al., 2008). Different sources such as leaders' subordinates, employees and colleagues, or also from their private environment, for instance their partners, could bring interesting insights into this phenomenon. Moreover, the duo level is interesting, for instance the congruence of experienced demands and resources across the two leaders of one duo. Future research should consider more diverse cases of those duos, especially in terms of success and tenure, for instance investigating duos that did not work out and separated from each other. Also, investigating gender constellations would be interesting, as notably, rarely two men seem to team up for such a duo. Only one duo consisting of two men was interviewed but had to be excluded from analysis as both were working full-time. Last, investigating this phenomenon across countries would contribute to the generalizability of findings (Schimmelpfennig et al., 2024). Overall, the present study only is the tip of an iceberg providing a starting point for comprehensive future research on joint leadership duos in part-time.

Conclusion

Joint leadership duos in part-time remain an understudied phenomenon, even though labor market issues such as diversity in management, attraction and retention of high qualified employees, work-life balance for all genders, sustainable HRM and leader well-being and performance may profit from it (Karlshaus & Kaehler, 2023). To get a better understanding of this leadership structure, especially of its impact on job characteristics influencing leader and team well-being, this study drew on JD-R theory (Bakker et al., 2023; Demerouti et al., 2001) and applied a mixed-method design (Stentz et al., 2012). 23 qualitative leader interviews and a quantitative survey presented to 22 leaders explored job demands and resources originating from the leadership structure for leaders but also their environment, resulting in a comprehensive list of demands and resources that leaders reported to be relevant for both

leaders and their environment. The results indicated that leaders experience resources more frequently than demands – resources seem to occur more continuously, while demands seem to occur more punctually. Overall, this study contributes to research and theory in various ways. It provides a deeper understanding of joint leadership duos in part-time, JD-R theory and gives concrete insights for potential interventions, future research, and organizations. Lastly, the evidence found supports that joint leadership duos in part-time, depending on context and set-up, indeed may be a potential solution for current labour market challenges, especially increasing leaders' well-being and performance.

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Appendix A

Measures of the present study

A1 Interview Scheme (American English)

Introduction

Hello, I am XX, currently conducting my master thesis as part of my international joint Master of Research in work and organizational psychology. The purpose of this interview is to gain knowledge about joint leadership duos that share a leadership position while at least one of the leaders is working part-time. I am interested in your personal experiences as a leader in this leadership structure, and the demands and resources that come with it.

Of course, there are no wrong or right answers and if any question is unclear, please let me know. Participation is completely voluntary, and you are not obliged to answer any of the questions. Should you feel uncomfortable at any point, you may skip the question(s) or stop the interview without any consequences at any point.

I would like to record the interview. I do this to ensure that I can fully focus on what you are saying and do not miss out on important information. The recording will then be transcribed and used for my analysis. Of course, the transcript will be pseudonymized, so the reporting will be anonymous and will not contain any confidential information. The information gained will only be used within the context of my master thesis. And if you would like me to stop the recording at any point, I will stop it immediately. Do you consent to take part in the interview? Do you consent that we will record this interview? Perfect, then we can start.

Variables	Question	Probes / Follow-Up Questions
Leadership constellation	Please describe shortly your current leadership constellation (your way of dual-joint leadership in part-time).	If not mentioned: <ul style="list-style-type: none"> - How do you divide your tasks? - Who is responsible for what? - Who of you is working part-time? - For how long do you work in this constellation?
Personal experience in leadership model	Please describe your experience of working in this leadership model.	To summarize it, you would describe your main experience as....?
Demands	What are the demands that you experience in your specific leadership model? Demands are job aspects that create stress or complicate good performance.	<ul style="list-style-type: none"> - Do you have an example of a situation to clarify the demand you just mentioned? - So, it seems like ___ (e.g., role conflict) seems to be a difficulty of the leadership model? - This aspect seems to challenge you (and your leadership partner).

		- So, the ___ (e.g., information sharing process) is challenging?
Resources	What are the resources that you have in this leadership model? Resources are job aspects that buffer stress and support good performance.	<ul style="list-style-type: none"> - Do you have an example of a situation to clarify the resource you just mentioned? - Why would you see this aspect (e.g., more work-life balance) as a resource? / How does this support you? - So, it seems like ___ (e.g., more work-life balance) seems to be an advantage of the leadership model? - This aspect seems to support you (and your leadership partner). - So, the ___ (e.g., increased pool of competences) is an advantage?

Conclusion

We have come to the end of the interview, to quickly summarize it: You work in a joint-leadership duo, where you share tasks and responsibilities, while you / your partner / both of you are working part-time. You summarize your experience as _____. The main demands you mentioned were _____. The main resources you mentioned were _____. Is there anything else you would like to add or is there something I understood wrong? Do you have any other comments or questions?

Thank you very much for your time and the interesting insights! This is very valuable for extending the scientific view on this leadership structure and its attention in practice.

I will send you a short follow-up survey after this meeting, it only takes 10min. If you feel comfortable, it would be amazing if you could also forward it to your leadership partner and your team members. This way, I can gain even more valuable insights into advantages and disadvantages due to the leadership structure on different levels. The survey of course is also fully anonymous.

Thank you again and have a great rest of your day!

A2 Survey (American English)

Introduction

Hello and welcome to this short survey on demands and resources of leadership duos in part-time, both for leaders and team members!

Two leaders share a leadership position while at least one leader works part-time. These are joint leadership duos in part-time. But what are the benefits and challenges of this leadership structure? For my master's thesis, I am interested in your personal experiences - either as a

leader who is part of a leadership duo, or as a team member who is led by such a leadership duo.

The information on the survey presented here is intended to enable you to make an informed decision about your participation. Please read this introduction carefully. Participation is completely voluntary, and you can stop the survey at any time without any consequences. In the survey, you will be asked to what extent you experience specific demands and resources in your daily work as a result of this leadership structure. Some demographic information is also asked. The survey takes approx. 10 minutes to complete.

There are no wrong or right answers and you are not obliged to answer the questions. If you feel uncomfortable at any point, you can skip the question(s) or stop the survey without any consequences.

Personal data (demographic information such as age or gender, and information on demands and resources) will be stored confidentially.

All responses are anonymous and will only be used in the context of this master's thesis. You can withdraw your consent to the use of your data at any time. Please contact me in this case (see below).

In order to be able to analyze the results at the team level, and to complement and reinforce the insights of the interviews, I ask you to provide the team code you received in the email with the survey link when requested. The teams will be coded and the results will be used anonymously.

If you have any questions, comments or feedback, you can contact me at any time at the following e-mail address: XX

Thank you very much for your time and support!

Consent item:

I have read the information on the survey and the use of data. I had the opportunity to ask questions and was able to make an informed decision about my participation.

Yes / No

Demographics:

Please indicate your...

- Role (leader or employee)
- Team code (send with survey link, as survey is distributed through one leader contact)
- Age
- Gender
- Country of Residence
- Work tenure in this leadership structure / led by this leadership structure
- Department (e.g., marketing, sales, etc.)
- Sector

- Working hours per week (part-time vs. full-time + concrete number + percentage)
- Working days per week
- Official / Unofficial working days of leaders together (during one week)

Job Demands / Job Resources

5-point Likert scale (1 never, 2 rarely, 3 sometimes, 4 often, 5 always)

Leaders	<ul style="list-style-type: none"> - Please indicate to what extent you personally experience each <i>demand</i> due to the leadership structure you are currently working in. - Please indicate to what extent you personally experience each <i>resource</i> due to the leadership structure you are currently working in.
Employees	<ul style="list-style-type: none"> - Please indicate to what extent you personally experience each <i>demand</i> due to the leadership structure you are led by. - Please indicate to what extent you personally experience each <i>resource</i> due to the leadership structure you are led by.

List:

Job Demands	Job Resources
- Workload	- Work-life balance
- Communication	- Leisure time / time for recovery
- Coordination	- Feeling of “Togetherness”
- Cooperation / Collaboration	- Complementary competences
- Role ambiguity	- Joint decision-making
- Role conflict	- Perspective broadening
- Interpersonal conflict	- (Reciprocal) social support
- Lack of trust	- Direct feedback
- Prevent assimilation of leaders with each other / Sustain heterogeneity	- Continuous learning
- Disagreements	- Synergy effects
- Information sharing	- Higher resilience
- Acceptance of environment	- Trust
- Power Imbalance	- Gain in self-confidence
- Power conflicts	- Increase in motivation
- Emotional demands	- Increase in creativity
- Emotional dissonance	- More capacities
- Mental demands	- Continuity
- Alignment	- Accessibility of leaders
- Complexity	- Recognition
- Time pressure	- Job Control / Autonomy
- Unfavorable shift work schedule	- Task variety
- Personal insecurity	- Use of skills
- Threats for perceived professionalism	- Organizational Justice
- Confusion	- Possibilities for learning and development
- Unclear responsibilities	- Professional pride
- Unclear tasks	- Procedural fairness
- Lack of autonomy	- Strategic planning
	- Supervisory coaching
	- Team cohesion
	- Balancing leadership behaviors

Conclusion

Thank you for your participation in this survey, your time and the interesting insights! Your answers have been saved and you can now close the browser.

The insights gained are very valuable to broaden the scientific perspective on joint leadership duos in part-time, as well as to achieve more attention for this leadership model in practice.

My master's thesis explores demands and resources experienced by leaders and team members who are involved in joint leadership duos in part-time. For this, I am integrating findings from interviews with individual leaders with the results of this survey in order to obtain a more comprehensive picture.

If you have any questions, comments or feedback, you can contact me by e-mail at any time:

XX

Last but not least, a small favor: If you like to, feel free to motivate your direct team colleagues to take part in the survey as well - the more insights, the better! 😊

Have a great rest of your week!

A3 Interview Scheme (German)

Einleitung

Hallo, ich bin XX und momentan führe ich meine Masterarbeit durch als Teil meines Masters "International joint master of research in work and organizational psychology". Erst einmal vielen Dank, dass sie sich die Zeit für dieses Interview nehmen! Das Ziel dieses Interviews ist es mehr zu erfahren über geteilte Führungsduos / "Joint leadership duos", die sich eine Führungsposition teilen, während mindestens eine/r der Führungskräfte in Teilzeit arbeitet.

Ich interessiere mich für Ihre persönlichen Erfahrungen als Führungskraft in dieser Führungsstruktur und die Anforderungen und Ressourcen, die damit einhergehen.

Das Interview wird 30 Minuten dauern. Selbstverständlich gibt es keine richtigen oder falschen Antworten und falls eine Frage unklar sein sollte, sagen Sie bitte Bescheid. Die Teilnahme ist komplett freiwillig und Sie sind nicht verpflichtet die Fragen zu beantworten.

Sollten Sie sich zu irgendeinem Zeitpunkt unwohl fühlen, können Sie eine Frage oder mehrere Fragen überspringen oder das Interview jederzeit ohne jegliche Konsequenzen abbrechen.

Ich würde das Interview gerne aufnehmen. Damit kann ich sichergehen, dass ich mich vollständig darauf fokussieren kann, was Sie mir erzählen, und verpasse keine wichtigen Informationen. Die Aufnahme wird transkribiert und für meine Analyse verwendet.

Selbstverständlich wird das Transkript pseudonymisiert, so dass der Bericht anonym sein wird

und keine vertraulichen Informationen beinhaltet. Die erhaltenen Informationen werden nur im Kontext dieser Masterarbeit verwendet werden. Und wenn Sie zu irgendeinem Zeitpunkt möchten, dass ich die Aufnahme stoppe, werde ich das unverzüglich tun. Willigen Sie ein an diesem Interview teilzunehmen? Willigen Sie ein, dass ich dieses Interview aufnehme? Perfekt, dann können wir anfangen.

Variablen	Frage	Probes / Follow-Up Fragen
Führungs- konstellation	Bitte beschreiben sie kurz Ihre aktuelle Führungskonstellation (Ihre Art des “Joint Leadership Duos” in Teilzeit)	Wenn nicht erwähnt: - Wie teilen Sie ihre Aufgaben? - Wer ist für was verantwortlich? - Wer von Ihnen arbeitet in Teilzeit? - Seit wann arbeiten Sie in dieser Konstellation?
Persönliche Erfahrungen im Führungsmodell	Bitte beschreiben Sie kurz Ihre Erfahrungen, in diesem Führungsmodell zu arbeiten.	Um das zusammenzufassen, würden Sie Ihre Haupterfahrung als.... beschreiben?
Anforderungen	Was sind die Anforderungen, die Sie in ihrem spezifischen Führungsmodell erleben? Anforderungen sind hier als Aspekte Ihres Jobs definiert, die Stress verursachen oder gute Performance komplizierter machen.	- Haben Sie ein Beispiel für eine Situation, um die gerade genannte Anforderung nochmal zu verdeutlichen? - Es scheint also, dass ____ (z.B., ein Rollenkonflikt) eine Schwierigkeit dieses Führungsmodells ist? - Dieser Aspekt scheint Sie (und Ihre/n Führungspartner/in) herauszufordern. - Also ist der/die/das ____ (z.B. Teilen von Informationen) herausfordernd?
Ressourcen	Was für Ressourcen erleben Sie in diesem Führungsmodell? Ressourcen sind hier als Aspekte Ihres Jobs definiert, die Stress abschwächen und gute Performance unterstützen.	- Haben Sie ein Beispiel für eine Situation, um die gerade genannte Ressource nochmal zu verdeutlichen? - Warum sehen Sie diesen Aspekt (z.B. mehr Work-life Balance) als eine Ressource? / Wie unterstützt Sie das? - Es scheint also, dass ____ (z.B., mehr Work-life Balance) ein Vorteil dieses Führungsmodells ist? - Dieser Aspekt scheint Sie (und Ihre/n Führungspartner/in) zu unterstützen. - Also ist der/die/das ____ (z.B. vergrößerter Pool an Kompetenzen) ein Vorteil?

Abschluss

Wir sind am Ende des Interviews angekommen. Um es kurz zusammenzufassen: Sie arbeiten in einem “joint leadership duo”, in dem Sie Aufgaben und Verantwortung teilen, während Sie

/ Ihr Partner / Sie beide in Teilzeit arbeiten. Sie fassen Ihre Erfahrungen als _____ zusammen. Die Hauptanforderungen, die Sie erwähnt haben, sind _____. Die Hauptressourcen, die Sie erwähnt haben, sind _____. Gibt es noch etwas, das Sie hinzufügen möchten oder gibt es etwas, was ich falsch verstanden habe? Haben Sie noch andere Kommentare oder Fragen?

Vielen Dank für Ihre Zeit und die interessanten Einblicke! Das ist sehr wertvoll, um die wissenschaftliche Sicht auf diese Führungsstruktur zu erweitern und dem Ganzen mehr Aufmerksamkeit in der Praxis zu schenken.

Ich werde Ihnen einen kurzen Folge-Fragebogen nach diesem Treffen zusenden. Das Ausfüllen dauert ca. 10 Minuten. Wenn Sie sich damit wohl fühlen, wäre es großartig, wenn Sie diesen ebenfalls an Ihre/n Führungspartner/in und Teammitglieder, also an die Mitarbeitenden, die sie führen, weiterleiten könnten. So kann ich noch mehr wertvolle Einblicke in diese spezifische Führungskonstellation erhalten, und Vor- und Nachteile auf verschiedenen Ebenen untersuchen. Der Fragebogen ist natürlich auch komplett anonym und wird ebenfalls ausschließlich für diese Masterarbeit verwendet.

Vielen Dank nochmal und haben Sie noch einen tollen Tag!

A4 Survey (German)

Einleitung

Hallo und herzlich willkommen zu dieser kurzen Umfrage über die Vorteile und Herausforderungen von Führungsduos in Teilzeit, sowohl für Führungskräfte als auch für Teammitglieder!

Zwei Führungskräfte teilen sich eine Führungsposition, während mindestens eine Führungskraft in Teilzeit arbeitet. Das sind joint leadership duos in part-time. Doch was sind die Vorteile und Herausforderungen dieser Führungsstruktur? Für meine Masterarbeit bin ich an Ihren persönlichen Erfahrungen interessiert - entweder als Führungskraft, die Teil eines Führungsduos ist, oder als Teammitglied, das von einem solchen Führungsduo geführt wird. Die hier präsentierten Informationen zur Umfrage sollen Ihnen eine fundierte Entscheidung zur Teilnahme ermöglichen. Bitte lesen Sie diese Einleitung daher gründlich. Die Teilnahme ist völlig freiwillig, und Sie können die Umfrage ohne jegliche Konsequenzen jederzeit beenden.

In der Umfrage werden Sie gefragt, inwieweit Sie in Ihrem Arbeitsalltag spezifische Anforderungen und Ressourcen bedingt durch diese Führungsstruktur erleben. Auch einige demographische Angaben werden abgefragt. Die Bearbeitungsdauer beträgt ca. 10 Minuten.

Es gibt keine falschen oder richtigen Antworten und Sie sind nicht verpflichtet, die Fragen zu beantworten. Sollten Sie sich an irgendeiner Stelle unwohl fühlen, können Sie die Frage(n) überspringen oder die Umfrage abbrechen, ohne dass dies irgendwelche Konsequenzen hat. Persönliche Daten (demografische Angaben wie z.B. Alter oder Geschlecht, und Angaben zu Anforderungen und Ressourcen) werden vertraulich gespeichert. Alle Antworten sind anonym und werden ausschließlich im Rahmen dieser Masterarbeit verwendet. Sie können jederzeit die Zustimmung zur Verwendung Ihrer Daten zurückziehen. Bitte kontaktieren Sie mich in diesem Fall (siehe unten).

Um die Ergebnisse auf Teamebene auswerten zu können, sowie um die Erkenntnisse aus den Interviews ergänzen und bekräftigen zu können, bitte ich Sie, den Teamcode, den Sie in der E-Mail mit dem Umfragelink erhalten haben, nach Aufforderung anzugeben. Die Teams werden codiert und die Ergebnisse anonymisiert verwendet.

Bei Fragen, Anmerkungen oder Feedback, können Sie mich jederzeit unter folgender E-Mail Adresse erreichen: XX

Vielen Dank für Ihre Zeit und Ihre Unterstützung!

Einverständniserklärung

Ich habe die Informationen zur Umfrage und der Datennutzung gelesen. Ich hatte die Gelegenheit, Fragen zu stellen, und konnte fundiert meine Entscheidung zur Teilnahme treffen.

Ja / Nein

Demographische Daten

Bitte geben Sie an...

- Rolle (Führungskraft oder Mitarbeiter:in)
- Teamcode
- Alter
- Geschlecht
- Wohnort (Land)
- Dauer der Arbeitstätigkeit in / unter dieser Führungskonstellation
- Arbeitsbereich (z.B. Marketing, Sales, etc.)
- Sektor
- Arbeitsstunden pro Woche (Teilzeit vs. Vollzeit + konkrete Nummer + Prozentanteil)
- Arbeitstage pro Woche
- Offizielle / Inoffizielle gemeinsame Arbeitstage der beiden Führungskräfte (pro Woche)

Job Anforderungen / Job Ressourcen

5-point Likert Scale (1 niemals, 2 selten, 3 manchmal, 4 oft, 5 immer)

Führungskräfte	<ul style="list-style-type: none"> - Bitte geben Sie an, wie häufig Sie persönlich jede <i>Anforderung</i>, bedingt durch die Führungsstruktur, in der sie momentan arbeiten, erleben. - Bitte geben Sie an, wie häufig Sie persönlich jede <i>Ressource</i>, bedingt durch die Führungsstruktur, in der sie momentan arbeiten, erleben.
Angestellte	<ul style="list-style-type: none"> - Bitte geben Sie an, wie häufig Sie persönlich jede <i>Anforderung</i>, bedingt durch die Führungsstruktur Ihrer Vorgesetzten, erleben. - Bitte geben Sie an, wie häufig Sie persönlich jede <i>Ressource</i>, bedingt durch die Führungsstruktur Ihrer Vorgesetzten, erleben.

Liste:

Job Anforderungen	Job Ressourcen
<ul style="list-style-type: none"> - Arbeitsbelastung - Kommunikation - Koordinierung - Zusammenarbeit / Kooperation - Rolleambiguität (Unklare Rolle) - Rollenkonflikt - Zwischenmenschliche Konflikte - Mangel an Vertrauen - Prevention der Assimilation von den Führungskräften miteinander / Aufrechterhaltung der Heterogenität - Unstimmigkeiten - Informationsaustausch - Akzeptanz der Umgebung - Machtungleichgewicht - Machtkonflikte - Emotionale Anforderungen - Emotionale Dissonanz - Mentale Anforderungen - Abstimmung / Alignment - Komplexität - Zeitdruck - Ungünstige Arbeitszeiten - Persönliche Verunsicherung - Bedrohung der wahrgenommenen Professionalität - Verwirrung - Unklare Verantwortlichkeiten - Unklare Aufgaben - Mangel an Autonomie 	<ul style="list-style-type: none"> - Vereinbarkeit von Beruf und Familie / Work-life balance - Freizeit / Zeit für Erholung - Gefühl der "Zusammengehörigkeit" - Ergänzende Kompetenzen - Gemeinsame Entscheidungsfindung - Perspektiven Erweiterung - (Gegenseitige) soziale Unterstützung - Direktes Feedback - Kontinuierliches Lernen - Synergieeffekte - Höhere Resilienz - Vertrauen - Gewinn an Selbstvertrauen - Steigerung der Motivation - Steigerung der Kreativität - Mehr Kapazitäten - Kontinuität - Erreichbarkeit der Führungskräfte - Anerkennung - Kontrolle über die eigene Arbeit / Autonomie - Aufgabenvielfalt - Einsatz von Fähigkeiten - Gerechtigkeit in der Organisation - Lern- und Entwicklungsmöglichkeiten - Stolz auf den eigenen Beruf - Prozedurale Fairness - Strategische Planung - Coaching durch die Führungskraft - Teamzusammenhalt - Ausgewogene Führungsverhalten

Abschluss

Vielen Dank für Ihre Teilnahme an dieser Umfrage, Ihre Zeit und die interessanten Einblicke! Ihre Antworten sind gespeichert worden und sie können den Browser nun schließen.

Die erworbenen Einblicke sind sehr wertvoll um die wissenschaftliche Perspektive auf Joint Leadership Duos in Part-Time, zu erweitern. Und so auch mehr Aufmerksamkeit für dieses Führungsmodell in der Praxis zu erreichen.

Meine Masterarbeit untersucht explorativ, welche Anforderungen und Ressourcen Führungskräfte und Mitarbeitende erleben, die Teil eines Joint Leadership Duos in Part-Time sind bzw. von einem solchen Duo geführt werden. Dafür integriere ich Erkenntnisse aus Interviews mit einzelnen Führungskräften mit den Ergebnissen dieser Umfrage, um ein umfassendes Bild zu erhalten.

Wenn Sie Fragen, Kommentare oder Feedback haben, können Sie sich jederzeit per E-Mail an mich wenden: XX

Zum Schluss noch ein kleines Anliegen: Wenn Sie möchten, motivieren Sie doch auch gerne Ihre direkten Teamkolleg:innen, ebenfalls an der Umfrage teilzunehmen - je mehr Einblicke, desto besser! 😊

Ich wünsche Ihnen eine tolle Restwoche!

Appendix B

Integration demands and resources from interviews and survey (literature)

Table B1

Demands Integration from both Interviews and Survey

Survey (literature)	Interviews
Consistent (mentioned in both sources)	
Acceptance of work environment (3) Communication (1) Alignment (4), Coordination (6) Information sharing (2) (Lack of) trust (27) Unclear responsibilities (16), Confusion (21), Unclear tasks (23) Personal insecurity (17)	Acceptance / Support of environment (2) Communication (3) Coordination (Alignment) (4) Handover organisation / information sharing (9) Trust (10) Unclarity / Confusion (12) Manage personal insecurities / worries (16)
Similarities / Overlap in both sources	
<i>includes need for abilities to deal with</i> Disagreements (19), Interpersonal conflicts (20), Power conflicts (26), Emotional demands (12), Emotional dissonance (14), Cooperation / Collaboration (5) Sustain heterogeneity (differences of the duo) (11) Workload (10), Time pressure (9) Unfavorable work schedule (13) Lack of autonomy (22)	Abilities to manage duo's interpersonal requirements (1) Balance homo- and heterogeneity in duo (6) Overtime work / Flexible working hours (8) Part-time challenges (14) Coordination (4), Joint decision making (7)
Only in Survey	Only in Interviews
Complexity (7) Mental demands (8) Role ambiguity (15) Role conflict (18) Power imbalance (25) Threats for perceived professionalism (24)	Discovery phase: developing good working set up with each other (5) Risk of MummyDaddyGames /playing leaders off against each other (11) Demanding for environment (subordinates, colleagues, supervisor) (13) External appearance of leadership duo (15) Expectation management with different stakeholders (17) Financial set-up for organization (more costs possible) (18) Structural representation in IT system often not possible (19) Further career development (20) Demanding leadership partner (21)

Note. Numbers in brackets indicate separate rankings of demands within sources based on frequency measures (for interviews based on count of interviews mentioning characteristic, for survey based on mean frequency values).

Table B2

Resources Integration from both Interviews and Survey

Survey (literature)	Interviews
Consistent (mentioned in both sources)	
Joint decision-making (9)	Joint decision making (1)
Perspective broadening (8)	Different perspectives (3)
Work-life balance (18)	Better compatibility of work & private life / family (6)
Complementary competences (6)	Complementary knowledge / competences / experiences (7)
(Reciprocal) social support (2)	Reciprocal social support (10)
Direct feedback (22)	Direct feedback (17)
Professional pride (12)	Proud of leadership structure (24)
Similarities / Overlap in both sources	
Strategic planning (21)	Possibility to consult with each other (2)
More capacities (30), Synergy effects (23)	More capacities / more power with two leaders (4)
Continuity (14), Accessibility (16)	Constant Availability (12)
Feeling of "Togetherness" (7)	Shared responsibility = big relief / security / fun (14)
Possibilities for learning and development (13), Continuous learning (15)	Possibility to develop & grow personally (18)
Continuity (14)	Decreased fluctuation / more retention (benef. for team/organ.) (22)
Leisure time / time for recovery (28), Higher resilience (10)	Better recovery beneficial for both well-being & work (16)
Trust (1)	Interpersonal good relationship (8)
Balancing leadership behavior (4), Perspective broadening (8), Accessibility (16), Procedural fairness (20)	Advantages of having two supervisors (for subordinates) (11)
Gain in self-confidence (25)	Empowerment juniors / part-timers (etc.) in leading positions (21)
Reciprocal coaching (27)	Possibility for joint and individual reflection (13), Possibility of junior / senior leader mentorship (23)
Only in Survey	Only in Interviews

Team cohesion (3) Use of skills (5) Increase in motivation (11) Job control / autonomy (17) Task variety (19) Increase in creativity (24) Recognition (26) Organizational justice (29)	Reliable and easy substitution (5) Possibility to pursue career with kids / part-time (9) More networks & connections (15) Better knowledge management & retention (19) Better representation (20)
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Note. Numbers in brackets indicate separate rankings of resources within sources based on frequency measures (for interviews based on count of interviews mentioning characteristic, for survey based on mean frequency values).

Appendix C

Aggregation of final demands and resources into higher-level categories

Table C1

Higher-Level Grouping of Integrated Demands from Both Interviews and Survey

Higher Level Grouping	Demand
Duo organization demands	Communication Alignment / Coordination Balance between homo- and heterogeneity in duo Information sharing Unclear responsibilities Confusion Unclear tasks Cooperation / collaboration Discovery phase: developing good working set up Complexity
Interpersonal demands	Mental demands Role ambiguity Role conflict Power imbalance Lack of autonomy (Lack of) trust Personal insecurity Disagreements Interpersonal conflicts Emotional demands Emotional dissonance Demanding leadership partner Power Conflicts
Environmental demands	Acceptance of work environment Risk of MummyDaddyGames /playing leaders off against each other Two leaders demanding for environment External appearance of leadership duo Expectation management with different stakeholders Threats for perceived professionalism
Structural demands	Overtime work Time Pressure Workload Flexible working hours Part-time challenges Unfavorable work schedule Financial set-up for organization Structural representation in IT systems Further career development

Table C2*Higher-Level Grouping of Integrated Resources from Both Interviews and Survey*

Higher Level Grouping	Resources
Collaborative resources	Different perspectives Possibility to consult with each other More capacities Synergy effects Complementary competences Feeling of "Togetherness" Joint decision-making Shared responsibility Balancing leadership behavior Job control / autonomy Strategic Planning Increase in motivation Increase in creativity
Support and substitution resources	(Reciprocal) social support Constant Availability Reliable and easy substitution Continuity Procedural fairness Accessibility Gain in self-confidence Reciprocal coaching Recognition
Work-life balance resources	Work-life balance / compatibility (Better) leisure time / time for recovery Higher resilience Possibility to pursue career with kids / part-time
Interpersonal and social resources	Interpersonal good relationship (Trust) Team cohesion More networks & connections
Developmental resources	Direct feedback Possibilities for learning and development Use of skills Task variety Possibility for joint and individual reflection Possibility of junior / senior leader mentorship
Organizational resources	Better knowledge management & retention Professional pride Decreased fluctuation / increased retention Empowerment of juniors / part-timers (etc.) in leading positions Better representation Organizational justice