



Contents lists available at ScienceDirect

## European Management Journal

journal homepage: [www.elsevier.com/locate/emj](http://www.elsevier.com/locate/emj)

## The dark side of digital external networking: A job demands–resources perspective

Julia Scheuerer<sup>\*</sup>, Elisabeth F. Mueller, Julia Thaler

Universität der Bundeswehr München, Werner-Heisenberg-Weg 39, 85579, Neubiberg, Germany

### ARTICLE INFO

#### Keywords:

Digital external networking  
Digital technology commitment  
Exhaustion  
Work engagement  
Networking ability  
Job performance  
JD-R model

### ABSTRACT

Digital transformation, networked value creation, and new technologies expose managers to new forms of work. In light of blurring organizational boundaries and increasing technology use, they increasingly face the challenge of digitally managing relationships with external stakeholders. The objective of this study is to provide insight into the potential adverse effects of digital external networking. Drawing on the job demands–resources model, we propose that digital external networking depletes managers' energetic resources, which may lead to an individual job performance breakdown via higher emotional exhaustion and lower work engagement. Results from a survey among 129 executives of the German Red Cross uncover and partially support this 'dark side' of digital external networking. Additionally, our research indicates that managers can reduce their perceived emotional exhaustion and increase work engagement by utilizing personal resources such as networking ability and digital technology commitment.

### 1. Introduction

Digital technologies have become increasingly prevalent in many organizations (Nosova & Norkina, 2021). Yet, research on the negative effects of daily technology use at work, particularly among managers, has remained scarce (Camarena & Fusi, 2022; Scholze & Hecker, 2024). While digitalization simplifies many processes, it also presents managers and organizations with new challenges (Parker & Grote, 2022). Work processes have accelerated and the amount of information managers have to process has increased exponentially (Wunderlich & Fischer, 2022). An increased information load can lead to information overload, which has been shown to negatively impact decision-making and managerial performance (Wunderlich & Fischer, 2022; Zeike et al., 2019). In addition, the new focus on the role of managers in shaping digital transformation is another significant pressure on them (Obermayer et al., 2022; Wrede et al., 2020). The impact of this is particularly evident in the context of external managerial networking (Pagani & Pardo, 2017). 'External managerial networking' broadly encompasses any interactions managers maintain 'with actors outside the formal boundaries of the organization – for example, customers, suppliers, the media, and managers in other organizations' (Hansen & Villadsen, 2017, p. 1556). Digital technologies modify external managerial networking practices, as they allow managers to communicate via

text, audio, and video with external actors across time and space ('digital external networking') (Leonardi, 2021). While such networking yields favorable organizational outcomes (Oberländer & Bipp, 2022), it may be more exhausting than face-to-face interactions (Raghuram et al., 2019), thereby generating higher costs through greater consumption of individual resources (De Jonge & Dormann, 2003). To prevent managers from fatigue, they must develop technological skills and digital competence (van Laar et al., 2017).

While researchers have begun to challenge the exclusive focus on positive, individual-level consequences of external networking and have found that networking can have a negative effect on individual well-being (Schönherr & Thaler, 2022), an investigation of the potential adverse effects of digitally enabled, external networking is lacking. This is surprising, given that managerial networking and the use of digital technologies are major societal and economic trends that, together, have gained importance through disruptive events such as the COVID-19 pandemic. Against this background, a more in-depth investigation of digital external networking is overdue.

In this study, we analyzed the adverse effects of digital external networking. In doing so, we used the job demands–resources (JD-R) model as a theoretical framework (Bakker & Demerouti, 2007; Demerouti et al., 2001). The JD-R model describes the relationships between job demands (i.e., aspects of a job that require sustained effort) and job

<sup>\*</sup> Corresponding author.

E-mail addresses: [julia.scheuerer@unibw.de](mailto:julia.scheuerer@unibw.de) (J. Scheuerer), [elisabeth.mueller@unibw.de](mailto:elisabeth.mueller@unibw.de) (E.F. Mueller), [julia.thaler@unibw.de](mailto:julia.thaler@unibw.de) (J. Thaler).

<https://doi.org/10.1016/j.emj.2024.11.004>

Received 6 May 2024; Received in revised form 17 October 2024; Accepted 19 November 2024

Available online 21 November 2024

0263-2373/© 2024 The Authors. Published by Elsevier Ltd. This is an open access article under the CC BY license (<http://creativecommons.org/licenses/by/4.0/>).

resources (i.e., aspects that facilitate the achievement of work goals) and their impact on employee well-being (i.e., emotional exhaustion and work engagement) and performance. As our aim was to understand the costs of digital managerial networking, we focused on the undesired negative effect of digital external networking as a relational job demand on individual job performance through higher emotional exhaustion and lower work engagement. We also considered the role of personal resources in the JD-R model by including managers' networking ability and digital technology commitment. To test the postulated model, we surveyed 129 executive directors of local German Red Cross (GRC) districts.

Our study makes three main contributions to the literature. First, by investigating managers' experiences with and attitudes toward digital technologies, we address a pressing need identified by Menz et al. (2021, p. 1707) to examine 'the changing roles of senior executives in the digital age.' Second, our study challenges research findings with a bias toward the benefits of external networking (Torenvlied & Akkerman, 2018) and adds to the few studies considering the potential downsides of managerial networking (Jimenez, 2017; Schönherr & Thaler, 2022), shedding light on the 'dark side' of digital external networking in terms of higher emotional exhaustion, lower work engagement, and performance breakdown. Third, we expand upon the JD-R framework by introducing the direct relationship between digital external networking as a job demand and work engagement into our model, as suggested by Ahmed (2019). We contribute a more comprehensive analysis of the effects of job demands and argue that digital external networking as a job demand can also have a serious detrimental effect on individuals' work engagement. Our findings encourage researchers to explore both the positive and negative effects of digital external networking on well-being, and to investigate personal resources relevant to individual well-being in the context of digitalization.

In terms of practical implications, our study underscores the dual impact of digital external networking. Practitioners should balance its pros and cons, promoting managers' digital technology commitment and networking abilities to reduce exhaustion and increase work engagement. Developing strategies that support the building of personal resources and provide sufficient downtime between digital networking is important to ensure performance.

## 2. Theoretical background and hypothesis development

### 2.1. JD-R model and core assumptions

We used the JD-R model developed by Demerouti et al. (2001) as a theoretical framework to analyze the negative effects of digital external networking. The JD-R model is particularly well suited to this study because it offers a robust and well-established framework for examining both positive and negative effects of job demands and can be applied in different contexts (Akkermans et al., 2013; Bakker et al., 2003; Hu et al., 2016).

The basic assumption of the JD-R model is that regardless of the occupational setting, job resources and job demands are important predictors of well-being, which 'reflects not only one's health but satisfaction with work and life' (Schulte & Vainio, 2010, p. 422). The JD-R model includes the well-being concepts of emotional exhaustion as 'the extent to which employees feel emotionally overwhelmed and drained by their work' (Janssen et al., 2010, p. 788) as well as work engagement as 'a positive, fulfilling, work-related state of mind that is characterized by vigor, dedication, and absorption' (Schaufeli et al., 2002, pp. 74–75), and connects these concepts with individual performance outcomes (Bakker et al., 2014; Demerouti & Bakker, 2011; Demerouti et al., 2001; Schaufeli et al., 2009).

The JD-R model predicts that job resources and job demands relate to individual outcomes through well-being (Bakker et al., 2014). 'Job resources' encompass aspects of a job that contribute to goal achievement by providing support and foster individual development (Bakker et al.,

2003). In contrast, 'job demands' refer to aspects of the job that require permanent physical and/or psychological endeavors and costs (Bakker et al., 2003). As such, job demands consume energy and may lead to workers' higher emotional exhaustion and lower work engagement, ultimately resulting in negative individual (work) outcomes and health impairment (Schaufeli & Taris, 2013). Research using the JD-R model has mainly theorized on situational job characteristics (Bakker & Demerouti, 2007), while less attention has been paid to personal characteristics (Chen, 2022). However, according to the interactionist perspective, both the person and the situation play roles in determining well-being and work-related behaviors (Chen, 2022; Pervin, 1989). To account for this interplay, the JD-R model has been modified to also include personal resources (Xanthopoulou et al., 2009). Against this background, our research model (Fig. 1) introduced digital external networking as a job demand and digital technology commitment and networking ability as personal resources.

### 2.2. Digital external networking as a job demand

We focused on digital external networking as a job demand. As mentioned, managers' external networking entails interactions with stakeholders (e.g., suppliers or customers) outside the formal boundaries of their organization (Hansen & Villadsen, 2017). Such interactions involve an energy-consuming investment of temporal and cognitive resources (Humphrey et al., 2007). Such external networking now takes place mainly via digital technologies rather than face to face, a development that is also positively related to managers' strain (Riedl, 2022; Tarafdar et al., 2007). In short, digital external networking as a job demand adds complexity to the job and depletes vital resources (Tarafdar et al., 2007).

According to the JD-R model, dealing with job demands involves using or eliciting available resources in the workplace (De Jonge & Dormann, 2003), resulting in increased exhaustion (Peng et al., 2010). Hobfoll's (2002) conservation of resources (COR) theory further endorses the adverse effects of job demands on exhaustion and job performance. This theory postulates that 'stress occurs when resources are threatened with loss or are lost' (Hobfoll, 2002, p. 312).

Research has indicated that both social interactions and the use of digital technologies are associated with increased exhaustion (Oksanen et al., 2021; Windeler et al., 2017). Digital external networking is assumed to increase the exhaustion of managers as they are overwhelmed with additional information (Wunderlich & Fischer, 2022; Zeike et al., 2019). Exhausted individuals are presumed to experience difficulties in investing sufficient energy in their work tasks, resulting in more mistakes (Bakker et al., 2004). Moreover, several (meta-analytic) studies have demonstrated that higher emotional exhaustion is negatively associated with job performance (Halbesleben & Bowler, 2007; Janssen et al., 2010). Therefore, we posit the following hypothesis:

**H1a.** The negative relationship between digital external networking and job performance is mediated by emotional exhaustion.

Hobfoll's (2002) COR theory also serves as an explanation for the potential link between job demands and work engagement. By focusing on how people strive to maintain and accumulate resources of various kinds, COR theory postulates that individuals 'seek to obtain, retain, and protect resources' (Hobfoll, 2002, p. 312). In protecting their resources from depletion (Halbesleben & Bowler, 2007; Janssen et al., 2010; Wright & Cropanzano, 1998), they may reduce their work engagement. Research has shown that job demands have deleterious effects on individuals' well-being at work, resulting in negative effects on engagement (Ahmed et al., 2017; Llorens et al., 2007; Schaufeli & Bakker, 2004).

Another explanation for this link is that, while digital external networking can facilitate work relationships, it may not foster the same depth of connection as face-to-face interactions. Although video and audio chats can facilitate the formation of interpersonal bonds, instant

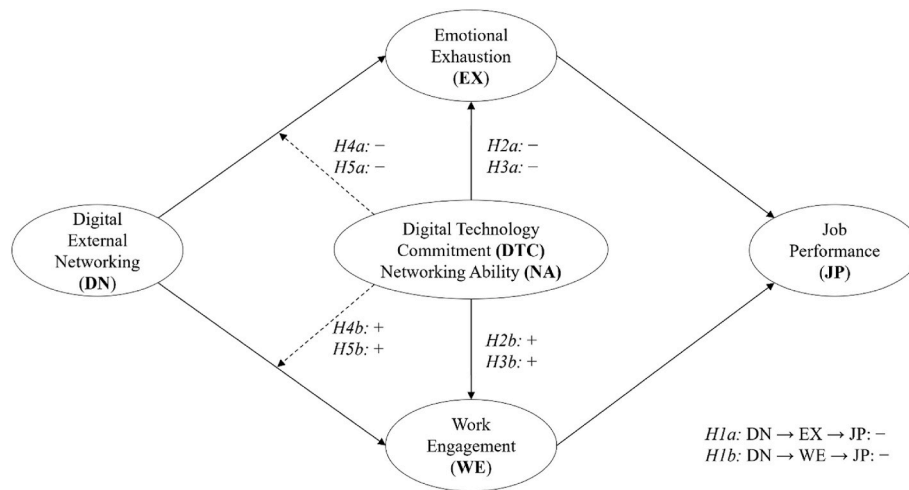


Fig. 1. Research model.

messaging often leads to the establishment of weaker and more superficial ties (Sherman et al., 2013). The shift towards weaker, ephemeral connections may impede the development of the robust bonds that are essential for sustained work engagement and collaboration in the workplace (Grossetti & Carey-Libbrecht, 2014).

Based on the JD-R model's assumption that job characteristics have an effect on individual performance outcomes via well-being, we assumed an indirect relationship between job demands and individual performance via lower work engagement. We therefore make the following hypothesis:

**H1b.** The negative relationship between digital external networking and job performance is mediated by work engagement.

### 2.3. Digital technology commitment and networking ability as personal resources

**Digital technology commitment and well-being.** Digital technology commitment covers the three dimensions of the technology commitment concept, i.e., technology acceptance, technology competence beliefs, and technology control beliefs (Neyer, Gebhardt, & Felber, 2012), and adapts them to the use of digital technologies. This concept builds on the fundamental assumptions of the early technology acceptance model (Davis, 1989), which states that technology use is based on individual acceptance. Individuals with greater digital technology commitment are more interested in new digital technologies and show higher competence and control beliefs regarding these technologies (Neyer, Gebhardt, & Felber, 2012). This resonates with the individual's self-efficacy beliefs as a central personal factor explaining individual behavior (Bandura, 1997), supporting the classification of digital technology commitment as a personal resource. Therefore, individuals showing higher digital technology commitment have a more positive attitude toward new digital technologies and more strongly believe in their ability to master such technologies and in their control of outcomes related to digital technology use (Neyer, Gebhardt, & Felber, 2012). As a result, they are more motivated to use digital technologies in their daily lives and their work environment.

According to the JD-R model, personal resources can be positively related to well-being (Bakker & Demerouti, 2017; Schaufeli & Taris, 2013). Therefore, we propose a direct, positive link between digital technology commitment as a personal resource and well-being, as follows:

**H2.** Digital technology commitment as personal resource is a) negatively related to emotional exhaustion and b) positively related to work engagement.

**Networking ability and well-being.** Recent research has introduced networking ability as a personal resource into the JD-R model (Liu et al., 2020). Networking ability is defined as the personal competence of building networks and staying well-connected with important stakeholders at work (Liu et al., 2020). Individuals' networking abilities significantly impact their well-being, as effective networking fulfills the innate human need for connection, thereby reducing stress and enhancing life satisfaction (Forrest, 2007; Volmer & Wolff, 2018). The JD-R model posits that personal resources, such as networking ability, can diminish emotional exhaustion. Research within this framework has demonstrated that being central in positive networks bolsters work engagement and lessens emotional exhaustion, underscoring the potential of networking ability to attenuate the adverse effect of negative network ties on emotional exhaustion (Ali Al-Atwi, 2019; van Wingarden et al., 2017). Additionally, networking ability, through its role in fostering positive relationships, has been shown to enhance work engagement by offering emotional, informational, and instrumental support, which, in turn, promotes higher engagement levels at work. This has been corroborated by findings that link individuals' centrality in positive networks to increased work engagement (Ali Al-Atwi, 2019). Furthermore, perceived competences, encompassing both mental and emotional dimensions, relate to individuals' self-efficacy in handling cognitive or emotional workplace tasks (Lorente et al., 2014), with networking ability reflecting a key aspect of personal competence in forming and maintaining significant professional relationships (Liu et al., 2020). Individuals showing high levels of networking ability are adept at developing these crucial contacts and building friendships and are more likely to have successful careers (Ferris et al., 2005; Janasz & Forrest, 2008). As networking ability is considered helpful in controlling and influencing the environment (Torenlvlied & Akkerman, 2018), individuals with high levels of networking ability are more likely to engage in their tasks and perform well (Lorente et al., 2014; Salanova et al., 2010). Therefore, in line with the JD-R model (Bakker & Demerouti, 2017; Schaufeli & Taris, 2013), we propose a direct, positive link between networking ability as a personal resource and well-being, as follows:

**H3.** Networking ability as a personal resource is a) negatively related to emotional exhaustion and b) positively related to work engagement.

### 2.4. Digital technology commitment and networking ability as moderating personal resources

According to the JD-R model, an individual's personal resources, in addition to having a direct effect on well-being, also moderate the relationship between job characteristics and well-being (Bakker &

Demerouti, 2017; Chen, 2022; Schaufeli & Taris, 2013). The COR theory (Hobfoll, 2002) further supports this moderating relationship by explaining that individuals with more (personal) resources are less prone to resource loss and emotional exhaustion. Thus, personal resources are expected to buffer the undesirable effect of job demands on emotional exhaustion and work engagement ('buffering hypothesis') (Bakker & Demerouti, 2017; van den Broeck et al., 2013).

We sought to investigate the buffering effect of digital technology commitment as a personal resource. Research has revealed that positive self-beliefs and self-perceptions (e.g., self-efficacy or sense of competence) attenuate the relationship between stressors and emotional exhaustion (Jex & Bliese, 1999). We therefore argue that individuals with higher levels of digital technology commitment perceive the use of digital technologies in external networking as less threatening to their energetic resources than those with lower levels, leading to weaker negative effects of digital external networking on emotional exhaustion and work engagement. Hence, we make the following hypothesis:

**H4.** Digital technology commitment weakens a) the positive relationship between digital external networking and emotional exhaustion and b) the negative relationship between digital external networking and work engagement.

Additionally, we sought to investigate the buffering effect of networking ability on the relationship between digital external networking and well-being. In line with the theoretical argumentation of the buffering hypothesis, we argue that individuals with higher networking ability would deal more effectively with the undesired effect of digital external networking on well-being. Research has revealed that individuals with interpersonal skills handle social stressors more effectively than others (Harvey et al., 2007). We assume that individuals with higher networking ability develop and maintain relationships more easily (Ferris et al., 2005). Social interactions may absorb fewer energetic resources, and managers may therefore perceive digital external networking as less threatening due to interpersonal competency. We therefore posit the following hypothesis:

**H5.** Networking ability weakens a) the positive relationship between digital external networking and emotional exhaustion and b) the negative relationship between digital external networking and work engagement.

### 3. Research design

#### 3.1. Sample and procedure

We examined our research question using a sample of the executives of the nonprofit GRC, one of the largest welfare organizations in Germany, with approximately four million members (GRC, 2022). We chose this study context for two reasons. First, GRC managers perform many activities (e.g., community relations, fundraising, strategic planning, political advocacy) that require intensive engagement and networking with external stakeholders (e.g., clients, donors, local authorities, politicians) (Johansen & LeRoux, 2013). Second, the GRC is currently making a special effort to develop digitalization strategies to transform its organization (Wohlfahrt, 2020). Thus, the GRC offers an appropriate context for examining the effects of digital networking practices. While all members of an organization may engage in networking activities, managers play a crucial role, as they represent the organization to external stakeholders. Therefore, we chose managers as suitable key informants for our study. To collect our data, we distributed an online survey via email to all GRC district managers ( $N = 453$ ) in November and December 2021.

After five weeks and two reminders, we received 132 completed questionnaires. We removed two cases due to extremely short response times to assure data quality, and one respondent who was 70 years old and had no subordinates, as this information indicated a person in an

honorary position. Thus, our final sample consisted of 129 questionnaires, with an effective response rate of 28.5%. To ensure confidentiality, personal data was anonymized so that no personal identifiers remain linked to the responses. On average, our respondents are 53 years old, with a majority being male (81%), and have been in their current position for nearly eleven years. A significant number of our respondents have a university degree (74%). Concerning their occupational background, most of our respondents hold a degree in business and economics (45%), followed by social work (13%), pedagogy (9%), law (8%), administrative sciences (5%), and other disciplines (20%). Typically, the survey respondents are top-level managers in organizations with an average of 356 full-time employees.

#### 3.2. Variables

Our questionnaire was created using pre-existing, multi-item scales. To ensure translation equivalence, we applied the back-translation technique whenever necessary and used translated scales as appropriate, given that our respondents were from Germany. Appendix A provides an overview of all of the constructs and associated items. Before handing out the questionnaire to our respondents, we pretested the survey among scholars and practitioners. Except for the demographic variables, all of the items were measured on a seven-point Likert scale (1 = *strongly disagree*; 7 = *strongly agree*).

We included three independent variables. First, *digital external networking* was measured based on four items adapted from the Work Design Questionnaire (Morgeson & Humphrey, 2006). Specifically, we adapted the items linguistically to capture the digital aspect of external managerial networking. Second, *networking ability* represents one dimension of the second-order construct of political skill (Ferris et al., 2005) and was measured using all six items of the original Political Skill Inventory (Ferris et al., 2005). Third, *digital technology commitment* was measured as a second-order construct formed by the three dimensions of *digital technology acceptance* (four items), *digital technology competence* (four items), and *digital technology control* (three items) (Neyer, Gebhardt, & Felber, 2012). We adapted the original German items linguistically to capture the digital aspect of technology commitment.

We also included two mediating variables. First, the managers' *emotional exhaustion* was measured using nine items from the validated Maslach Burnout Inventory (Maslach & Jackson, 1981). Second, *work engagement* was captured using the short version of the validated Utrecht Work Engagement Scale (Schaufeli & Bakker, 2003), covering the three dimensions of vigour, dedication, and absorption (Schaufeli et al., 2006).

Our dependent variable, *job performance*, was measured using six items from the Task-Based Job Performance Scale (Goodman & Svyantek, 1999), which asked the managers about their job performance in terms of achieving job-related goals fulfilling organizational requirements (Barrick & Ryan, 2004).

We included six control variables in the model: the managers' *age* in years, *gender* (1 = male; 0 = female), *education* (1 = *with a university degree*; 0 = *without a university degree*), *functional background* (1 = *business-related*; 0 = *non-business-related*), *tenure* (in years), and number of subordinates in terms of *full-time employees*.

### 4. Methods

#### 4.1. Analysis

We used partial least squares (PLS) path modelling (Wold, 1982) to test our hypotheses. PLS is suitable for evaluating intricate structural models with many indicators when the path model includes one or more formatively measured constructs. Our higher-order construct, *digital technology commitment*, possesses reflective-formative characteristics, hence the selection of PLS can be regarded as appropriate (J. F. Hair et al., 2019; Rigdon, 2016; Sarstedt et al., 2019, 2023). Below, we

present our results in two stages. First, we evaluate the reliability and validity of our measurement model. Second, we report on the relationships in our structural model. All of the analyses were performed with SmartPLS 3 (Ringle et al., 2015).

4.2. Results

**Measurement model evaluation.** We ran an exploratory factor analysis of all of the items that clearly replicated the intended factor structure. The resulting measurement model consisted of eight latent reflective constructs. Three of them (*digital technology acceptance* (TA), *digital technology competence* (TCOM), and *digital technology control* (TCON)) formed the second-order construct *digital technology commitment*, specified in the repeated indicators approach (J. Jr. Hair et al., 2021; Sarstedt et al., 2019). To validate the formative higher-order construct of *digital technology commitment* (DTC), we checked for potential collinearity issues among the lower-order components (TA, TCOM, TCON). Therefore, we examined the variance inflation factor (VIF) values of the lower-order constructs (Sarstedt et al., 2019), which showed results well below the conservative threshold of 3, suggesting that multicollinearity was not an issue in our data (J. F. Hair et al., 2019; Sarstedt et al., 2023). Furthermore, by bootstrapping with 10,000 subsamples, we showed that the relationship between the three lower-order constructs and their higher-order component was significant and relevant (TA: 0.570,  $p = 0.000$ ; TCOM: 0.570,  $p = 0.000$ ; TCON: 0.161,  $p = 0.014$ ) (Sarstedt et al., 2019).

All of the items of the eight latent, first-order constructs loaded significantly on their respective constructs at the desired value of 0.70 (J. F. Hair et al., 2019) or at the acceptable threshold of 0.50 (EX4, EX8, NA1, JP6) (Hulland, 1999). All of the constructs exceeded the recommended cut-offs for composite reliability ( $>0.70$ ) and average variance extracted ( $>0.50$ ), showing good construct and convergent validity (J. Jr. Hair et al., 2021). Discriminant validity was demonstrated by the values for the heterotrait-monotrait ratio (HTMT) being below the cut-off value of 0.85 (J. Jr. Hair et al., 2021).

**Structural model evaluation.** Table 1 shows the results of the structural model. The variance explained in our endogenous constructs ranged from an adjusted  $R^2 = 14.3\%$  to an adjusted  $R^2 = 30.4\%$ . As all of the Stone-Geisser values ( $Q^2$ ) exceeded the threshold of 0, our model had predictive relevance (J. Jr. Hair et al., 2021).

Table 2 summarizes the results of the direct effects between our focal variables, and Table 3 shows the results of the indirect (and total) effects in our research model. To determine the statistical significance of the path coefficients, we ran a bias-corrected, two-tailed bootstrap procedure with 129 cases and 10,000 samples (Streukens & Leroi-Werelds, 2016).

The direct effects evaluation demonstrated a significant positive effect of *digital external networking* on *exhaustion*. Additionally, the findings indicate a substantial negative effect of *digital external networking* on *work engagement*. In addition, the results showed a significant and positive direct effect of *work engagement* on *job performance* but a non-significant, negative direct effect of *exhaustion* on *job performance*.

With regard to the mediation Hypothesis 1a, we found no significant indirect effect of *digital external networking* on *job performance* through higher levels of *emotional exhaustion*. Regarding the mediation Hypothesis 1b, the model showed a significant and negative indirect effect

**Table 1**  
Evaluation of the structural model.

Construct	$R^2$	Adjusted $R^2$	$Q^2$
EX	24.8%	17.7%	0.137
WE	21.7%	14.3%	0.124
JP	35.3%	30.4%	0.203

Notes: EX = emotional exhaustion; WE = work engagement; JP = job performance;  $R^2$  = coefficient of determination;  $Q^2$  = Stone-Geisser value.

**Table 2**  
Direct effects.

	$\beta$ -Coefficient	$p$ -Value
DN → EX	0.318 <sup>c</sup>	0.005
DN → WE	-0.189 <sup>b</sup>	0.038
DN → JP	0.079	0.254
NA → EX	-0.246 <sup>a</sup>	0.055
NA → WE	0.276 <sup>c</sup>	0.014
DTC → EX	-0.435 <sup>c</sup>	0.000
DTC → WE	0.294 <sup>c</sup>	0.005
DN × NA → EX	-0.033	0.705
DN × DTC → EX	-0.063	0.435
DN × NA → WE	-0.041	0.676
DN × DTC → WE	-0.032	0.728
EX → JP	-0.029	0.795
WE → JP	0.567 <sup>c</sup>	0.000
<b>Controls</b>		
Size (no. of full-time employees) → EX	-0.228 <sup>c</sup>	0.002
Gender (1 = male) → WE	-0.206 <sup>c</sup>	0.003

Notes: DN = digital external networking; EX = emotional exhaustion; JP = job performance; NA = networking ability; DTC = digital technology commitment; WE = work engagement.

For parsimony, only significant paths for the control variables are shown.

<sup>a</sup>  $p < 0.1$ .

<sup>b</sup>  $p < 0.05$ .

<sup>c</sup>  $p < 0.01$ .

**Table 3**  
Summary of mediation effects.

Total Effect	$\beta$ -Coefficient	$p$ -Value	BC-CI 95%	
DN→JP	-0.037	0.644		
Direct Effect				
DN→JP	0.079	0.262		
Indirect Effects				
DN → EX → JP	-0.009	0.808	-0.080	0.046
DN → WE → JP	-0.107	0.046	-0.221	-0.037

Notes: DN = digital external networking; EX = emotional exhaustion; JP = job performance; WE = work engagement; BC-CI = bias-corrected confidence interval.

of *digital external networking* on *job performance* through lower levels of *work engagement*. Therefore, while the results did not lend support to Hypothesis 1a, they did support Hypothesis 1b.

Concerning the direct effects of personal resources proposed in Hypotheses 2a and 2b, we found that *digital technology commitment* significantly reduced *emotional exhaustion* and was positively related to *work engagement*. Therefore, Hypotheses 2a and 2b were supported. With regard to Hypotheses 3a and 3b, the results suggested that *networking ability* was significantly and negatively related to *emotional exhaustion* and positively related to the perceived level of *work engagement*. Therefore, Hypotheses 3a and 3b were supported.

However, the buffering Hypotheses 4a and 4b as well as 5a and 5b were not supported, indicating that neither *digital technology commitment* nor *networking ability* weaken the positive relationship between *digital external networking* and *emotional exhaustion* or the negative relationship between *digital external networking* and *work engagement*.

4.3. Robustness checks

4.3.1. Qualitative validation study

To include additional insights into the theoretical mechanisms from an ex-post perspective and get a better understanding of our quantitative results, we conducted eight semi-structured expert interviews. The experts included two professionals involved in the digital transformation of the GRC (E2, E8), two HR experts responsible for professional development of GRC managers (E1, E5), and four local GRC district

managers (E3, E4, E6, E7). The interviews lasted on average 45 min and were recorded, transcribed verbatim, and coded using MAXQDA. We used the thematic coding approach (Miles et al., 2020) to make sense of our qualitative data with a particular focus on the theoretically postulated relationships between our focal constructs. Exemplary statements can be found in Appendix B.

The interviewees highlighted the negative impact of digital external networking on managers' well-being. They pointed out that the digital format of networking increases both the volume of interactions and distractions, especially during long meetings (E1, E2, E6). Some experts also observed that, without the need for travel, managers can schedule more back-to-back meetings with different people, which can lead to greater exhaustion (E1, E2, E3). In addition, the interviewees noted that digital external networking may reduce work engagement, particularly for GRC managers, who often chose their profession because they enjoy face-to-face interactions and working directly with people (E3). The impersonal nature of digital interactions can feel unfulfilling or even demotivating, as it undermines the core values that drew these individuals to their roles. One interviewee expressed feeling disconnected due to the shift to digital networking formats, emphasizing their preference for in-person interactions (E5). This underscores how digital networking can reduce work engagement by failing to meet individuals' social and interpersonal needs (E7). Regarding the impact on job performance, the interviewees highlighted both a 'bright side' and a 'dark side' of digital external networking. Some pointed out that it can increase efficiency in work processes (E2, E6). However, others noted that a lack of personal feedback in digital settings can negatively affect performance (E2).

When discussing the role of digital technology commitment and networking ability as personal resources in the postulated relationships, the interviewees indicated that both were important to managers' well-being. For instance, one expert described herself as a digital enthusiast who enjoys trying out new technologies and exploring new experiences. She emphasized her strong inclination towards networking and how easily she forms new connections, both online and in person (E8). Hence, these personal resources are associated with high engagement at work.

#### 4.3.2. Further robustness checks

We conducted several additional analyses as robustness checks to evaluate the validity and reliability of our results. To test for potential common method bias, we conducted Harman's one-factor test to rule out the possibility of a single method factor being the primary source of variation (Harman, 1976). Additionally, we conducted a comprehensive collinearity test with a random dependent variable following Kock and Lynn's (2012) approach. The results showed no instances of a VIF higher than 3.3 within the internal model. Furthermore, we applied a marker variable technique (i.e., a construct-level correction approach) to test for common method bias (Chin et al., 2013). The results of these three methods indicated that our findings were not driven by common method bias (Chin et al., 2013; Harman, 1976; Kock, 2015).

Second, we tested for nonresponse bias. The comparison of the background characteristics of the first- and last-wave participants yielded no significant differences, thus indicating that our dataset contained no response bias (Armstrong & Overton, 1977).

Third, we ran several multigroup analyses in SmartPLS (Ringle et al., 2015) to test the robustness of the results. The analyses showed very few significant differences between the groups: young ( $n = 67$ ) versus old ( $n = 62$ ) respondents and female ( $n = 24$ ) versus male ( $n = 104$ ) respondents.

Lastly, we used an alternative dependent variable in our model and replaced *job performance* with the six-item construct *personal accomplishment* (Maslach & Jackson, 1981). The results remained qualitatively unchanged.

## 5. Discussion

This study focused on investigating the adverse effects of digital external networking. We found support for the indirect performance-reducing effect of digital external networking via lower levels of work engagement but no support for the indirect negative effect via higher levels of emotional exhaustion.

Hockey's (1997) compensatory control mechanism may explain the discrepancy between our finding of an insignificant indirect effect via emotional exhaustion and the findings of previous research. Accordingly, individuals are able to protect themselves from a performance breakdown for some time by investing extra resources into their tasks. However, this compensation functions at the expense of an increased subjective effort that could lead to other costs such as negative effects on health and well-being (Hockey, 1997). Another explanation may be that relationships through digital external networking can be seen as bridging ties to other organizations, which according to Sader et al. (2021) reduce perceived stress, hence the managers' exhaustion. These positive effects could offset potential negative effects and lead to the insignificant result. This explanation aligns with the findings of Turek et al. (2023) who identified a negative relationship between organizational constraints as one dimension of job demands and intra-role performance, but also a positive relationship between organizational constraints and extra-role performance.

Moreover, our study supports the findings from the literature suggesting a direct effect of personal resources on well-being (Bakker & Demerouti, 2017; Schaufeli & Taris, 2013). Our results add digital technology commitment and networking ability to the personal resources investigated in the JD-R literature and show that they can effectively reduce perceived emotional exhaustion and increase work engagement. In addition, the results of our study support one of the central assertions of the COR theory, according to which exhausted individuals protect their resources by a withdrawal from work, consequently exhibiting less work engagement (Hobfoll, 1989; Wright & Cropanzano, 1998).

However, we did not find any empirical evidence for the buffering effect of personal resources, which is described in the literature as mitigating the potential negative effects of job demands on well-being (Bakker & Demerouti, 2017; Schaufeli & Taris, 2013). This result is in line with the fact that empirical evidence on the buffering effect is generally scarce (Bakker & Demerouti, 2017). One possible reason for the inconsistency between theory and empirics may be that the literature proposes that personal resources' buffering effect is more evident in particularly emotionally challenging situations (De Jonge & Kompier, 1997; Xanthopoulou et al., 2007, 2013). Our research setting involved digital external networking, which takes place remotely, which may be less emotionally demanding than face-to-face interactions. This study contributes to understanding the adverse effects of digital external networking by highlighting its indirect performance-reducing effect through lower work engagement and by questioning the buffering effect of personal resources, while acknowledging the important effect of personal resources on an individual's well-being.

## 6. Limitations and research implications

Our study has several limitations, some of which are related to the chosen research design and method of data collection. We opted for a cross-sectional study design, because senior managers often lack the time to respond to several survey waves. Nonetheless, we advise that future research implements longitudinal studies. In our survey, we relied on self-reports, which can be distorted by common method variance. Even though our statistical remedies did not detect common method bias, we suggest that future studies use additional data sources, or additional methods, to gain more nuanced and deeper insights into the estimated relationships. In addition, our digital external networking scale included only the frequency of contact as the measurement of

networking. Further research could include other aspects of networking, such as the level of the manager's proactivity and the structure or content of the networking activities (Chiu et al., 2006). In terms of sampling, we acknowledge that our subjects (i.e., managers of a welfare organization) are not known to be particularly tech-savvy. Therefore, the effects of digital external networking and of the personal resources may not be generalizable to managers in other sectors. It would be interesting to compare our results to those of studies conducted in tech-related work environments.

With regard to the chosen theoretical model, it should be noted that the key concepts of the JD-R model are usually assessed at the individual level. However, because organizations are often primarily interested in understanding the levels of job demands or well-being at the team, department, or organizational level, future research should take a multilevel approach to capture these different levels of analysis (Bakker & Demerouti, 2017).

Despite these limitations, our research provides valuable insights with significant contributions to research. By investigating managers' experiences and attitudes toward digital technologies (i.e., their digital technology commitment), we have addressed the need to examine the roles of senior executives that are fundamentally changing due their organizations' digital transformation (Menz et al., 2021). We thus add to the literature that stresses the importance of employees' personal resources and their influence on their (now mostly digital) work (Chen, 2022).

We investigated how managers are individually equipped with digital technology commitment as a personal resource and how this resource affects their emotional exhaustion and work engagement. While the 'bright side' of external managerial networking has been studied extensively, research on its negative effects has been rather limited (Torenvlied & Akkerman, 2018). In response to the call to examine the 'dark side' of digitization in terms of increasing psychological strain (Scholze & Hecker, 2024), our study sheds light on the adverse effects of digital external networking on job performance, mediated by lower work engagement. Our study thus adds to the limited body of research analyzing the potential downsides of managerial networking (Jimenez, 2017).

In addition, we address the further challenges for external networking that arise through the use of digital technologies. Our study treats digital external networking as a job demand, which extends previous studies that have largely considered external networking as a job resource (Akkermans et al., 2013; Liu et al., 2020; Oksa et al., 2021). By using the JD-R model to examine the direct link between a job demand and work engagement, our study differs from these previous studies that focus on the link between a job resource and work engagement.

Furthermore, we also aim to foster a broader research agenda by inspiring researchers to delve deeper into the effects of digitalization on individuals' well-being. For example, we hope that our study will stimulate researchers to investigate the effects of digital external networking beyond resource access arguments that emphasize only its positive effects. Instead, we urge researchers to include arguments relating to adverse effects such as energy depletion and resource conservation. Moreover, a further examination of the personal resources that are relevant to individual well-being in the context of digitalization may yield important results.

## 7. Practical implications

From a practical point of view, digital external networking may be a double-edged sword. Specifically, while research has emphasized the positive effects of (digital) external networking, our findings demonstrate the importance of addressing the downsides as well. Therefore,

practitioners should be aware of both the performance-enhancing and performance-reducing effects of networking. Moreover, organizations must strategically promote their managers' personal resources, such as digital technology commitment and networking ability, which have the potential to reduce emotional exhaustion and increase work engagement. Therefore, it is crucial to formulate tactics that acknowledge the individual mindsets of executives toward these resources and bolster them to enable greater performance. Our interviewees (see Appendix B) suggest that there should be sufficient time between digital networking activities to allow for processing, preparation, and follow-up. One important step that organizations could take is to allocate more time between meetings for their employees. Additionally, comprehensive training in the use of digital technologies would be beneficial. Employees should not only be familiar with how digital technologies work and how to use them, but also learn how to make *good use* of them. Furthermore, managers stated that taking breaks outdoors or at least without digital technology resulted in a reduction in feelings of exhaustion.

## 8. Conclusion

In this study, we examined the 'dark side' of digital external networking. Drawing on the JD-R model, we found that digital external networking depletes managers' energetic resources, which may lead to an individual job performance breakdown via lower work engagement. However, we found no consistent evidence for an indirect performance-reducing effect of digital external networking through higher levels of perceived emotional exhaustion. Hence, we contribute to the current body of knowledge by showing that digital external networking is a job demand as defined by the JD-R model, which has a direct impact on work engagement. In addition, our results indicate that networking ability and digital technology commitment as personal resources directly influence an individual's well-being. While both personal resources reduce the level of perceived emotional exhaustion, they increase the level of work engagement. However, a buffering effect could not be detected. We hope that our study will inspire researchers to investigate the impacts of digital external networking beyond resource access arguments that emphasize only its positive effects. Instead, we urge researchers to include arguments relating to energy depletion and resource conservation that address its adverse effects.

## CRedit authorship contribution statement

**Julia Scheuerer:** Formal analysis, Investigation, Validation, Writing – original draft, Writing – review & editing, Data curation, Visualization, Project administration. **Elisabeth F. Mueller:** Conceptualization, Methodology, Formal analysis, Validation, Writing – original draft, Writing – review & editing, Supervision, Project administration. **Julia Thaler:** Conceptualization, Methodology, Validation, Writing – original draft, Writing – review & editing, Supervision.

## Acknowledgements

We thank the AE and the anonymous reviewers for their valuable comments and suggestions. We are also grateful to the participants in research seminars and conferences, such as the Academy of Management Annual Meeting in 2023, for their help in developing earlier versions of this paper. In addition, we are especially grateful to Lorenz Schönherr for his efforts in collecting the survey data as part of a larger primary data collection for his Ph.D. project. We would also like to thank the survey participants and interviewees for sharing their insights with us.

## APPENDIX A

## Constructs and Items

Construct	Items	Adapted from	Mean	S. D.
<b>Digital External Networking (DN)</b>				
DN1	The job requires spending a great deal of time with external actors using new and innovative digital technologies.	Morgeson and Humphrey (2006); Stegmann et al. (2010)	4.34	1.35
DN2	The job involves interaction with external actors via new and innovative digital technologies.			
DN3	On the job, I frequently communicate with external actors via new and innovative digital technologies.			
DN4	The job involves a great deal of interaction with external actors using new and innovative digital technologies.			
<b>Networking Ability (NA)</b>				
NA1	I spend a lot of time at work developing connections with external actors	Ferris et al. (2005); Lvina et al. (2012)	4.98	1.16
NA2	I am good at building relationships with influential external actors at work.			
NA3	I have developed a large network of external actors whom I can ask for support when I need to get the things done.			
NA4	At work, I know a lot of important external actors and am well connected.			
NA5	At work, I spend a lot of time building relationships with external actors.			
NA6	I am good at using my connections and relationships with external actors to make things happen at work.			
<b>Digital Technology Commitment (DTC)</b>				
TA1	I am very curious about new and innovative digital technologies.	Neyer, Gebhardt, & Felber, 2012	5.37	1.27
TA2	I quickly acquire a liking for new and innovative digital technologies.			
TA3	I am always interested in using new and innovative digital technologies.			
TA4	If I had the opportunity, I would use new and innovative digital technologies much more often than I currently do.			
TCOM1r	When dealing with new and innovative digital technologies, I am often afraid of failing.		5.97	1.11
TCOM2r	For me, dealing with new and innovative digital technologies mostly constitutes an excessive demand.			
TCOM3r	When using new and innovative digital technologies, I am afraid of rather making serious mistakes than using them properly.			
TCOM4r	I find it difficult to deal with new and innovative digital technologies – most of the time I just cannot do it.		4.75	1.32
TCON1	It is up to me whether I succeed in using new and innovative digital technologies – it has little to do with chance or luck.			
TCON2	If I have difficulties in dealing with new and innovative technologies, it ultimately depends on me to solve them.			
TCON3	What happens when I deal with new and innovative digital technologies is ultimately under my control.			
<b>Emotional Exhaustion (EX)</b>				
EX1	I feel emotionally drained from my work.	Maslach and Jackson (1981); Sirén et al. (2018)	2.36	1.18
EX2	I feel used up at the end of the workday.			
EX3	I feel fatigued when I get up in the morning and have to face another day on the job.			
EX4	Working with people all day is really a strain for me.			
EX5	I feel burned out from my work.			
EX6	I feel frustrated by my job.			
EX7	I feel like I'm working too hard on my job.			
EX8	Working with people directly puts too much stress on me.			
EX9	I feel like I'm at the end of my rope.			
<b>Work Engagement (WE)</b>				
WE1	At my work, I feel bursting with energy.	Schaufeli and Bakker (2003)	5.32	1.01
WE2	At my job, I feel strong and vigorous.			
WE3	I am enthusiastic about my job.			
WE4	My job inspires me.			
WE5	When I get up in the morning, I feel like going to work.			
WE6	I feel happy when I am working intensively.			
WE7	I am proud of the work I do.			
WE8	I am immersed in my work.			
WE9	I get carried away when I'm working.			
<b>Job Performance (JP)</b>				
JP1	I achieve the objectives of my job.	Goodman and Svyantek (1999)	5.61	0.80
JP2	I met my criteria for job performance.			
JP3	I fulfill all the requirements of my job.			
JP4	I am competent in all areas of the job and handle tasks with proficiency.			
JP5	I perform well in the overall job by carrying out tasks as expected.			
JP6	I plan and organize to achieve objectives of the job and meet deadlines.			



## APPENDIX B

## Exemplary Quotes from the Qualitative Validation Study

Theme	Expert	Statements
<b>Emotional exhaustion</b>		
DN → EX	E1	[...] Online meetings are often shorter than live meetings, which also means they are scheduled back-to-back. [...] This sheer volume and density of meetings and the feeling of not being able to keep up are strong because more and more topics come up and you don't really have time to deal with them when you're sort of jumping from one videoconference to the next.
DN → EX	E2	If I have to run online meetings myself, I set a time limit and schedule breaks, because there is nothing worse than a team meeting that goes on for 3 h without a break. It's ineffective. People switch off, they drift off, they google somewhere else and you're physically and mentally exhausted after a day like that. At some point, you're no longer receptive.
DN → EX	E3	I notice that you are overwhelmed. [...] A new email comes in, then I read it, then I feel compelled to respond immediately. It doesn't always improve communication, this immediate reaction, maybe it was better when you wrote letters, because the letter was a bit on the way and then you read it, then you didn't reply immediately, and you had a bit more time to think about it.
DN → EX	E6	The flood of information, the ease of sharing more information, involving more people, of course, carries the danger of increasing density.
<b>Work engagement</b>		
DN → WE	E3	I think there are people, particularly in the social services sector, who didn't necessarily go into this field because they want to work on something on their laptop at home in their home office. I think there are some people who say: "I don't like this anymore because I want to be out there talking to people in person. I want to be in touch."
DN → WE	E5	[When asked about the role of digital external networking in the context of work engagement; authors' note] Yes, yes, there's a risk, especially if you work a lot with people like at the German Red Cross, and digital networking makes it more impersonal.
DN → WE	E7	[...] because if the whole personal exchange is completely missing, then I think work engagement would actually decrease, because you're actually there for the human factor, and if all that happens without personal face-to-face contact [...] then I can actually imagine that engagement would decrease.
<b>Digital technology commitment</b>		
DTC → WE	E1	I really enjoy working with people and I always try to inspire them, not to say: "You all have to do it this way," but to show them how new technology can make things easier. And then I always hope that there is a spark.
DTC → WE/EX	E4	I want to emphasize that it's not about age, it's about the willingness to engage with technology or to embrace something new. We've had very young people who swear by the paper contract, and we've also had people who are about to retire who say it's totally cool that we can now collect data with tablets, so it's actually people's openness to new technology. And the confidence in the technology or the technical affinity that one may or may not have.
DTC → WE/EX	E8	Yes, we see higher engagement. We tend to be digital enthusiasts in our team. It's fun, it's just trying things out and it's also a little bit playful. And then experiences are shared and sometimes a tool is rejected and it's like "OK, we tried that, it doesn't work at all, nobody uses it anymore."
<b>Networking ability</b>		
NA → EX/WE	E3	You can see that extroverted people who are good at approaching others also find it easier to communicate digitally.
NA → EX/WE	E6	These are the same people who make a big impression in videoconferencing as they would in a face-to-face format.
NA → EX/WE	E8	I am someone who likes to network. I think networking in general is relatively easy for me, but I especially like informal networking, talking to each other about a certain topic and then recognizing each other on another occasion and following up on the conversation from before, that's super easy for me.
<b>Job Performance</b>		
DN → JP	E2	For me, it [digital external networking; authors' note] is much more efficient. It saves a lot of time. It's also much more convenient, it saves travel time.
DN → WE → JP	E2	My impression is that the performance is better when you meet in person, because you really support each other. It becomes clearer who might be able to deliver something thematically better than the others, and what input is coming in, and then you can reflect back directly: "I didn't get enough input from you, I know you could maybe do more" and that gets lost a little bit online.
DN → WE → JP	E6	But otherwise I have had a good experience with a collaborative document, I once wrote a framework concept with colleagues from other organizations, a joint framework concept for online guidance and counselling, and it worked very well, so everybody in the group really delivered their contributions on time and to the point.
<b>Practical recommendations</b>		
	E2	We have had competence training and technical training, and some organizations have only offered technical training, which I think is not enough, especially for people over 50. We need more training in technology competence.
	E2	I've done a lot of research into online collaboration methods. I think it's very important to schedule things in a very balanced way. There has to be a big enough break between meetings where you can maybe just walk around the block. Yes, that's very important, the daily planning, and then, of course, the micro-planning is also important to just say I know the attention span is 45 min and then I'll take a 15 or 20 min break and ask the participants to do the same.
	E3	I think there is not enough training in the use of digital media. Because with young people it's taken for granted, you just say they're young, they must be able to do it, and with other colleagues you just invest in technical training in how to use the software. But how to work with it effectively, that's what I think is neglected.
	E8	We try to counteract the stress by also doing a resource check. At the end of the team meeting, we have a traffic light system - green, yellow, red - to get a quick picture of the mood. How is everyone's workload, and even if somebody is red, the team leader goes back into the conversation and asks what's going on.

Notes: All statements have been translated from German into English. DN = digital external networking; EX = emotional exhaustion; WE = work engagement; DTC = digital technology commitment; NA = networking ability; JP = job performance.

## References

Ahmed, U. (2019). *Job Demands and work engagement: Call for more urgent empirical attention* (SSRN scholarly paper 3488161). <https://papers.ssrn.com/abstract=3488161>.

Ahmed, U., Shah, M. H., Siddiqui, B. A., Shah, S. A., Dahri, A. S., & Qureshi, M. A. (2017). Troubling job demands at work: Examining the deleterious impact of workload and emotional demands on work engagement. *International Journal of Academic Research in Business and Social Sciences*, 7(6). <https://doi.org/10.6007/IJARBS/v7-i6/2949>

- Akkermans, J., Schaufeli, W. B., Brenninkmeijer, V., & Blonk, R. W. B. (2013). The role of career competencies in the Job Demands—resources model. *Journal of Vocational Behavior*, 83(3), 356–366. <https://doi.org/10.1016/j.jvb.2013.06.011>
- Ali Al-Atwi, A. (2019). The effect of social network ties on performance: A moderated mediation model. *International Journal of Productivity and Performance Management*, 69(9), 2139–2159. <https://doi.org/10.1108/IJPPM-01-2019-0038>
- Armstrong, J. S., & Overton, T. S. (1977). Estimating nonresponse bias in mail surveys. *Journal of Marketing Research*, 14(3), 396–402. <https://doi.org/10.1177/002224377701400320>
- Bakker, A. B., & Demerouti, E. (2007). The job demands-resources model: State of the art. *Journal of Managerial Psychology*, 22(3), 309–328. <https://doi.org/10.1108/02683940710733115>
- Bakker, A. B., & Demerouti, E. (2017). Job demands-resources theory: Taking stock and looking forward. *Journal of Occupational Health Psychology*, 22(3), 273–285. <https://doi.org/10.1037/ocp0000056>
- Bakker, A. B., Demerouti, E., Boer, E., & Schaufeli, W. B. (2003). Job demands and job resources as predictors of absence duration and frequency. *Journal of Vocational Behavior*, 62(2), 341–356. [https://doi.org/10.1016/s0001-8791\(02\)00030-1](https://doi.org/10.1016/s0001-8791(02)00030-1)
- Bakker, A. B., Demerouti, E., & Sanz-Vergel, A. I. (2014). Burnout and work engagement: The JD-R approach. *Annual Review of Organizational Psychology and Organizational Behavior*, 1(1), 389–411. <https://doi.org/10.1146/annurev-orgpsych-031413-091235>
- Bakker, A. B., Demerouti, E., & Verbeke, W. (2004). Using the job demands-resources model to predict burnout and performance. *Human Resource Management*, 43(1), 83–104. <https://doi.org/10.1002/hrm.20004>
- Bandura, A. (1997). *Self-efficacy: The exercise of control (12th print)*. W.H. Freeman.
- Barrick, M., & Ryan, A. M. (2004). Personality and work: Reconsidering the role of personality in organizations. In M. Barrick, & A. M. Ryan (Eds.), *John Wiley & sons* (p. 1). Auflage.
- Camarena, L., & Fusi, F. (2022). Always connected: Technology use increases technostress among public managers. *The American Review of Public Administration*, 52(2), 154–168. <https://doi.org/10.1177/02750740211050387>
- Chen, I.-S. (2022). The moderating role of personal resources in the relationship between job demands and work engagement. *Psihologija*, 55(2), 123–136. <https://doi.org/10.2298/PSI200707007C>
- Chin, W. W., Thatcher, J. B., Wright, R. T., & Steel, D. (2013). Controlling for common method variance in PLS analysis: The measured latent marker variable approach. In *New perspectives in partial least squares and related methods* (pp. 231–239). Springer.
- Chiu, C.-M., Hsu, M.-H., & Wang, E. T. G. (2006). Understanding knowledge sharing in virtual communities: An integration of social capital and social cognitive theories. *Decision Support Systems*, 42(3), 1872–1888. <https://doi.org/10.1016/j.dss.2006.04.001>
- Davis, F. (1989). Perceived usefulness, perceived ease of use, and user acceptance of information technology. *MIS Quarterly*, 13(3), 319–340. <https://doi.org/10.2307/249008>
- De Jonge, J., & Dormann, C. (2003). The DISC model: Demand-induced strain compensation mechanisms in job stress. In *Occupational stress in the service professions* (pp. 43–74). CRC Press.
- De Jonge, J., & Kompier, M. A. J. (1997). A critical examination of the demand-control-support model from a work psychological perspective. *International Journal of Stress Management*, 4(4), 235–258. <https://doi.org/10.1023/B:IJSM.0000008152.85798.90>
- Demerouti, E., & Bakker, A. B. (2011). The job demands—resources model: Challenges for future research. *SA Journal of Industrial Psychology*, 37(2). <https://doi.org/10.4102/sajip.v37i2.974>
- Demerouti, E., Bakker, A. B., Nachreiner, F., & Schaufeli, W. B. (2001). The job demands-resources model of burnout. *Journal of Applied Psychology*, 86(3), 499–512. <https://doi.org/10.1037/0021-9010.86.3.499>
- Wohlfahrt, D. R. K. (2020). *Handbuch Digitalstrategie—DRK e.V. DRK-Wohlfahrt*. <https://drk-wohlfahrt.de/unsere-themen/soziale-innovation-digitalisierung/kompetenzzentren-digitalisierung/handbuch-digitalstrategie/>.
- Ferris, G. R., Treadway, D. C., Kolodinsky, R. W., Hochwarter, W. A., Kacmar, C. J., Douglas, C., & Frink, D. D. (2005). Development and validation of the political skill inventory. *Journal of Management*, 31(1), 126–152. <https://doi.org/10.1177/0149206304271386>
- Forrest, B. J. (2007). The need to connect. *Journal of the International Neuropsychological Society*, 13(3). <https://doi.org/10.1017/S1355617707070683>
- Goodman, S. A., & Svyantek, D. J. (1999). Person—organization fit and contextual performance: Do shared values matter. *Journal of Vocational Behavior*, 55(2), 254–275. <https://doi.org/10.1006/jvbe.1998.1682>
- GRC. (2022). “Das sind wir”: A self-portrayal of the German red cross. <https://www.drk.de/das-drk/selbstdarstellung-des-roten-kreuzes>.
- Grossetti, M., & Carey-Libbrecht, L. (2014). What are social networks doing to social networks?: personal networks and new means of communication. *Réseaux*, 184185(2), 187–209.
- Hair, J., Jr., Hair, J. F., Hult, G. T. M., Ringle, C. M., & Sarstedt, M. (2021). *A primer on partial least squares structural equation modeling (PLS-SEM)*. Sage publications.
- Hair, J. F., Risher, J. J., Sarstedt, M., & Ringle, C. M. (2019). When to use and how to report the results of PLS-SEM. *European Business Review*, 31(1), 2–24. <https://doi.org/10.1108/EBR-11-2018-0203>
- Halbesleben, J. R. B., & Bowler, W. M. (2007). Emotional exhaustion and job performance: The mediating role of motivation. *Journal of Applied Psychology*, 92(1), 93–106. <https://doi.org/10.1037/0021-9010.92.1.93>
- Hansen, M. B., & Villadsen, A. R. (2017). The external networking behaviour of public managers—the missing link of weak ties. *Public Management Review*, 19(10), 1556–1576. <https://doi.org/10.1080/14719037.2017.1299200>
- Harman, H. H. (1976). *Modern factor analysis*. University of Chicago press.
- Harvey, P., Harris, R. B., Harris, K. J., & Wheeler, A. R. (2007). Attenuating the effects of social stress: The impact of political skill. *Journal of Occupational Health Psychology*, 12(2), 105–115. <https://doi.org/10.1037/1076-8998.12.2.105>
- Hobfoll, S. E. (2002). Social and psychological resources and adaptation. *Review of General Psychology*, 6(4), 307–324. <https://doi.org/10.1037/1089-2680.6.4.307>
- Hockey, G. R. (1997). Compensatory control in the regulation of human performance under stress and high workload; a cognitive-energetical framework. *Biological Psychology*, 45(1–3), 73–93. [https://doi.org/10.1016/s0301-0511\(96\)05223-4](https://doi.org/10.1016/s0301-0511(96)05223-4)
- Hu, Q., Schaufeli, W. B., & Taris, T. W. (2016). Extending the job demands-resources model with guanxi exchange. *Journal of Managerial Psychology*, 31(1), 127–140. <https://doi.org/10.1108/JMP-04-2013-0102>
- Hulland, J. (1999). Use of partial least squares (PLS) in strategic management research: A review of four recent studies. *Strategic Management Journal*, 20(2), 195–204. [https://doi.org/10.1002/\(SICI\)1097-0266\(199902\)20:2<195::AID-SMJ13>3.0.CO;2-7](https://doi.org/10.1002/(SICI)1097-0266(199902)20:2<195::AID-SMJ13>3.0.CO;2-7)
- Humphrey, S. E., Nahrgang, J. D., & Morgeson, F. P. (2007). Integrating motivational, social, and contextual work design features: A meta-analytic summary and theoretical extension of the work design literature. *Journal of Applied Psychology*, 92(5), 1332–1356. <https://doi.org/10.1037/0021-9010.92.5.1332>
- Janasz, S. C., & Forret, M. L. (2008). Learning the art of networking: A critical skill for enhancing social capital and career success. *Journal of Management Education*, 32(5), 629–650. <https://doi.org/10.1177/1052562907307637>
- Janssen, O., Lam, C. K., & Huang, X. (2010). Emotional exhaustion and job performance: The moderating roles of distributive justice and positive affect. *Journal of Organizational Behavior*, 31(6), 787–809. <https://doi.org/10.1002/job.614>
- Jex, S. M., & Bliese, P. D. (1999). Efficacy beliefs as a moderator of the impact of work-related stressors: A multilevel study. *Journal of Applied Psychology*, 84(3), 349–361. <https://doi.org/10.1037/0021-9010.84.3.349>
- Jimenez, B. S. (2017). When ties bind: Public managers' networking behavior and municipal fiscal health after the great recession. *Journal of Public Administration Research and Theory*, 27(3), 69. <https://doi.org/10.1093/jopart/muw069>
- Johansen, M., & LeRoux, K. (2013). Managerial networking in nonprofit organizations: The impact of networking on organizational and advocacy effectiveness. *Public Administration Review*, 73(2), 355–363. <https://doi.org/10.1111/puar.12017>
- Kock, N. (2015). Common method bias in PLS-SEM: A full collinearity assessment approach. *International Journal of e-Collaboration*, 11(4), 1–10.
- Kock, N., & Lynn, G. (2012). Lateral collinearity and misleading results in variance-based SEM: An illustration and recommendations. *Journal of the Association for Information Systems*, 13(7).
- Leonardi, P. M. (2021). COVID-19 and the new technologies of organizing: Digital exhaust, digital footprints, and artificial intelligence in the wake of remote work. *Journal of Management Studies*, 58(1), 249–253. <https://doi.org/10.1111/joms.12648>
- Liu, Y., Hochstein, B., Bolander, W., Bradford, K., & Weitz, B. A. (2020). Internal selling: Antecedents and the importance of networking ability in converting internal selling behavior into salesperson performance. *Journal of Business Research*, 117, 176–188. <https://doi.org/10.1016/j.jbusres.2020.04.036>
- Llorens, S., Schaufeli, W., Bakker, A., & Salanova, M. (2007). Does a positive gain spiral of resources, efficacy beliefs and engagement exist? *Computers in Human Behavior*, 23(1), 825–841. <https://doi.org/10.1016/j.chb.2004.11.012>
- Lorente, L., Salanova, M., Martínez, I. M., & Vera, M. (2014). How personal resources predict work engagement and self-rated performance among construction workers: A social cognitive perspective. *International Journal of Psychology: Journal International de Psychologie*, 49(3), 200–207. <https://doi.org/10.1080/ijop.12049>
- Lvina, E., Johns, G., Treadway, D. C., Blicke, G., Liu, Y., Liu, J., Atay, S., Zettler, I., Solga, J., Noethen, D., & Ferris, G. R. (2012). Measure invariance of the political skill inventory (PSI) across five cultures. *International Journal of Cross Cultural Management*, 12(2), 171–191. <https://doi.org/10.1177/1470595812439870>
- Maslach, C., & Jackson, S. E. (1981). The measurement of experienced burnout. *Journal of Organizational Behavior*, 2(2), 99–113. <https://doi.org/10.1002/job.4030020205>
- Menz, M., Kunisch, S., Birkinshaw, J., Collis, D. J., Foss, N. J., Hoskisson, R. E., & Prescott, J. E. (2021). Corporate strategy and the theory of the firm in the digital age. *Journal of Management Studies*, 58(7), 1695–1720. <https://doi.org/10.1111/joms.12760>
- Miles, M. B., Huberman, M. A., & Saldana, J. (2020). *Qualitative data analysis: A methods sourcebook (4th ed.)*. Sage Publishing.
- Morgeson, F. P., & Humphrey, S. E. (2006). The Work Design Questionnaire (WDQ): Developing and validating a comprehensive measure for assessing job design and the nature of work. *Journal of Applied Psychology*, 91(6), 1321–1339. <https://doi.org/10.1037/0021-9010.91.6.1321>
- Neyer, F. J., Gebhardt, C., & Felber, J. (2012). Entwicklung und validierung einer kurzskala zur erfassung von technikkberetschaft. *Diagnostic*. <https://doi.org/10.1026/0012-1924/a000067>.
- Nosova, S., & Norkina, A. (2021). Digital technologies as a new component of the business process. *Procedia Computer Science*, 190, 651–656. <https://doi.org/10.1016/j.procs.2021.06.076>
- Oberländer, M., & Bipp, T. (2022). Do digital competencies and social support boost work engagement during the COVID-19 pandemic? *Computers in Human Behavior*, 130, Article 107172. <https://doi.org/10.1016/j.chb.2021.107172>
- Obermayer, N. D., Cszimadia, T. D., & Banász, Z. D. (2022). Companies on thin ice due to digital transformation: The role of digital skills and human characteristics. *International and Multidisciplinary Journal of Social Sciences*, 11(3). <https://doi.org/10.17583/rimics.10641>. Article 3.
- Oksa, R., Kaakinen, M., Savela, N., Ellonen, N., & Oksanen, A. (2021). Professional social media usage: Work engagement perspective. *New Media & Society*, 23(8), 2303–2326.

- Oksanen, A., Oksa, R., Savela, N., Mantere, E., Savolainen, I., & Kaakinen, M. (2021). COVID-19 crisis and digital stressors at work: A longitudinal study on the Finnish working population. *Computers in Human Behavior*, 122, Article 106853. <https://doi.org/10.1016/j.chb.2021.106853>
- Pagani, M., & Pardo, C. (2017). The impact of digital technology on relationships in a business network. *Industrial Marketing Management*, 67, 185–192. <https://doi.org/10.1016/j.indmarman.2017.08.009>
- Parker, S. K., & Grote, G. (2022). Automation, algorithms, and beyond: Why work design matters more than ever in a digital world. *Applied Psychology*, 71(4), 1171–1204. <https://doi.org/10.1111/apps.12241>
- Peng, K. Z., Wong, C., & Che, H. (2010). The missing link between emotional demands and exhaustion. *Journal of Managerial Psychology*, 25(7), 777–798. <https://doi.org/10.1108/02683941011075300>
- Pervin, L. A. (1989). Persons, situations, interactions: The history of a controversy and a discussion of theoretical models. *Academy of Management Review*, 14(3), 350–360. <https://doi.org/10.5465/amr.1989.4279066>
- Raghuram, S., Hill, N. S., Gibbs, J. L., & Maruping, L. M. (2019). Virtual work: Bridging research clusters. *The Academy of Management Annals*, 13(1), 308–341. <https://doi.org/10.5465/annals.2017.0200>
- Riedl, R. (2022). On the stress potential of videoconferencing: Definition and root causes of Zoom fatigue. *Electronic Markets*, 32(1), 153–177. <https://doi.org/10.1007/s12525-021-00501-3>
- Rigdon, E. E. (2016). Choosing PLS path modeling as analytical method in European management research: A realist perspective. *European Management Journal*, 34(6), 598–605. <https://doi.org/10.1016/j.emj.2016.05.006>
- Ringle, C. M., Da Silva, D., & Bido, D. (2015). *Structural equation modeling with the SmartPLS*.
- Sader, M., Chollet, B., Brion, S., & Trendel, O. (2021). Supported, detached, or marginalized? The ambivalent role of social capital on stress at work. *European Management Journal*, 39(6), 768–778. <https://doi.org/10.1016/j.emj.2021.03.002>
- Salanova, M., Schaufeli, W. B., Xanthopoulos, D., & Bakker, A. B. (2010). The gain spiral of resources and work engagement: Sustaining a positive worklife. *Work Engagement: A Handbook of Essential Theory and Research*, 118–131.
- Sarstedt, M., Hair, J. F., Cheah, J.-H., Becker, J.-M., & Ringle, C. M. (2019). How to specify, estimate, and validate higher-order constructs in PLS-SEM. *Australasian Marketing Journal*, 27(3), 197–211. <https://doi.org/10.1016/j.ausmj.2019.05.003>
- Sarstedt, M., Hair, J. F., & Ringle, C. M. (2023). “PLS-SEM: Indeed a silver bullet” – retrospective observations and recent advances. *Journal of Marketing Theory and Practice*, 31(3), 261–275. <https://doi.org/10.1080/10696679.2022.2056488>
- Schaufeli, W. B., & Bakker, A. B. (2003). Utrecht work engagement scale: Preliminary manual. [www.schaufeli.com](http://www.schaufeli.com).
- Schaufeli, W. B., & Bakker, A. B. (2004). Job demands, job resources, and their relationship with burnout and engagement: A multi-sample study. *Journal of Organizational Behavior*, 25(3), 293–315. <https://doi.org/10.1002/job.248>
- Schaufeli, W. B., Bakker, A. B., & Salanova, M. (2006). The measurement of work engagement with a short questionnaire: A cross-national study. *Educational and Psychological Measurement*, 66(4), 701–716. <https://doi.org/10.1177/0013164405282471>
- Schaufeli, W. B., Bakker, A. B., & van Rhenen, W. (2009). How changes in job demands and resources predict burnout, work engagement, and sickness absenteeism. *Journal of Organizational Behavior*, 30(7), 893–917. <https://doi.org/10.1002/job.595>
- Schaufeli, W. B., Salanova, M., González-romá, V., & Bakker, A. B. (2002). The measurement of engagement and burnout: A two sample confirmatory factor analytic approach. *Journal of Happiness Studies*, 3(1), 71–92. <https://doi.org/10.1023/A:1015630930326>
- Schaufeli, W. B., & Taris, T. W. (2013). A critical review of the job demands-resources model: Implications for improving work and health. In G. F. Bauer, & O. Hämmig (Eds.), *Bridging occupational, organizational and public health: A transdisciplinary approach* (pp. 43–68). Springer Science+Business. [https://doi.org/10.1007/978-94-007-5640-3\\_4](https://doi.org/10.1007/978-94-007-5640-3_4).
- Scholze, A., & Hecker, A. (2024). The job demands-resources model as a theoretical lens for the bright and dark side of digitization. *Computers in Human Behavior*, 155, Article 108177. <https://doi.org/10.1016/j.chb.2024.108177>
- Schönherr, L., & Thaler, J. S. (2022). Individual outcomes of managerial networking: A job demands-resources perspective. *Academy of Management Proceedings*, 2022(1). <https://doi.org/10.5465/AMBPP.2022.16585abstract>
- Schulte, P., & Vainio, H. (2010). Well-being at work—overview and perspective. *Scandinavian Journal of Work, Environment & Health*, 36(5), 422–429. <https://doi.org/10.5271/sjweh.3076>
- Sherman, L. E., Michikyan, M., & Greenfield, P. M. (2013). The effects of text, audio, video, and in-person communication on bonding between friends. *Cyberpsychology: Journal of Psychosocial Research on Cyberspace*, 7(2). <https://doi.org/10.5817/CP2013-2-3>. Article 2.
- Sirén, C., Patel, P. C., Örtqvist, D., & Wincnet, J. (2018). CEO burnout, managerial discretion, and firm performance: The role of CEO locus of control, structural power, and organizational factors. *Long Range Planning*, 51(6), 953–971. <https://doi.org/10.1016/j.lrp.2018.05.002>
- Stegmann, S., van Dick, R., Ullrich, J., Charalambous, J., Menzel, B., Egold, N., & Wu, T. T.-C. (2010). Der work design questionnaire. *Zeitschrift Für Arbeits- Und Organisationspsychologie A&O*, 54(1), 1–28. <https://doi.org/10.1026/0932-4089/a000002>
- Streukens, S., & Leroi-Werelds, S. (2016). Bootstrapping and PLS-SEM: A step-by-step guide to get more out of your bootstrap results. *European Management Journal*, 34(6), 618–632. <https://doi.org/10.1016/j.emj.2016.06.003>
- Tarafdar, M., Tu, Q., Ragu-Nathan, B. S., & Ragu-Nathan, T. S. (2007). The impact of technostress on role stress and productivity. *Journal of Management Information Systems*, 24(1), 301–328. <https://doi.org/10.2753/MIS0742-1222240109>
- Torenlvied, R., & Akkerman, A. (2018). Managerial networking. In R. Alhajj, & J. Rokne (Eds.), *Encyclopedia of social network analysis and mining* (pp. 1235–1238). New York: Springer. [https://doi.org/10.1007/978-1-4939-7131-2\\_276](https://doi.org/10.1007/978-1-4939-7131-2_276).
- Turek, D., Klein, H. J., & Wojtczuk-Turek, A. (2023). Overcoming organizational constraints: The role of organizational commitment and job crafting in relation to employee performance. *European Management Journal*. <https://doi.org/10.1016/j.emj.2023.12.001>
- van den Broeck, A., van Ruysseveldt, J., Vanbelle, E., & Witte, H. (2013). The job demands–resources model: Overview and suggestions for future research. In A. B. Bakker (Ed.), *Advances in positive organizational psychology* (pp. 83–105). Emerald Group Publishing Limited. [https://doi.org/10.1108/S2046-410X\(2013\)0000001007](https://doi.org/10.1108/S2046-410X(2013)0000001007).
- van Laar, E., van Deursen, A. J. A. M., van Dijk, J. A. G. M., & Haan, J. (2017). The relation between 21st-century skills and digital skills: A systematic literature review. *Computers in Human Behavior*, 72, 577–588. <https://doi.org/10.1016/j.chb.2017.03.010>
- van Wingerden, J., Derks, D., & Bakker, A. B. (2017). The impact of personal resources and job crafting interventions on work engagement and performance. *Human Resource Management*, 56(1), 51–67. <https://doi.org/10.1002/hrm.21758>
- Volmer, J., & Wolff, H.-G. (2018). A daily diary study on the consequences of networking on employees’ career-related outcomes: The mediating role of positive affect. *Frontiers in Psychology*, 9, 2179. <https://doi.org/10.3389/fpsyg.2018.02179>
- Windeler, J. B., Chudoba, K. M., & Sundrup, R. Z. (2017). Getting away from them all: Managing exhaustion from social interaction with telework. *Journal of Organizational Behavior*, 38(7), 977–995. <https://doi.org/10.1002/job.2176>
- Wold, H. (1982). Soft modelling: The basic design and some extensions. *Systems Under Indirect Observation, Part II*, 36–37.
- Wrede, M., Velamuri, V. K., & Dauth, T. (2020). Top managers in the digital age: Exploring the role and practices of top managers in firms’ digital transformation. *Managerial and Decision Economics*, 41(8), 1549–1567. <https://doi.org/10.1002/mde.3202>
- Wright, T. A., & Cropanzano, R. (1998). Emotional exhaustion as a predictor of job performance and voluntary turnover. *Journal of Applied Psychology*, 83(3), 486–493. <https://doi.org/10.1037/0021-9010.83.3.486>
- Wunderlich, N., & Fischer, L. (2022). *How digital business strategy shapes task complexity in datafication of knowledge work*.
- Xanthopoulos, D., Bakker, A. B., Demerouti, E., & Schaufeli, W. B. (2009). Reciprocal relationships between job resources, personal resources, and work engagement. *Journal of Vocational Behavior*, 74(3), 235–244. <https://doi.org/10.1016/j.jvb.2008.11.003>
- Xanthopoulos, D., Bakker, A. B., Dollard, M. F., Demerouti, E., Schaufeli, W. B., Taris, T. W., & Schreurs, P. J. G. (2007). When do job demands particularly predict burnout? The moderating role of job resources. *Journal of Managerial Psychology*, 22(8), 766–786. <https://doi.org/10.1108/02683940710837714>
- Xanthopoulos, D., Bakker, A. B., & Fischbach, A. (2013). Work engagement among employees facing emotional demands: The role of personal resources. *Journal of Personnel Psychology*, 12(2), 74.
- Zeike, S., Choi, K.-E., Lindert, L., & Pfaff, H. (2019). Managers’ well-being in the digital era: Is it associated with perceived choice overload and pressure from digitalization? An exploratory study. *International Journal of Environmental Research and Public Health*, 16(10). <https://doi.org/10.3390/ijerph16101746>

Julia Scheuerer, MA, is a PhD candidate at the Department of Economics and Management at the Universität der Bundeswehr München, Germany. She holds a bachelor’s degree in psychology and a master’s degree in business management. She is also an external lecturer at the Hochschule Macromedia, University of Applied Sciences. Her research interests include the controllability of job demands and their influence on job performance. Julia Scheuerer is the corresponding author and can be contacted at: [julia.scheuerer@unibw.de](mailto:julia.scheuerer@unibw.de).

Elisabeth F. Mueller is a full professor of Strategic Management at the Universität der Bundeswehr München, Germany. She holds a doctoral degree and a habilitation from the University of Passau and was a Visiting Scholar at the University of Pennsylvania’s Wharton School. Her research interests lie in the areas of strategic management and entrepreneurship, with a focus on both the organizational and individual mechanisms and consequences of networked and digital value creation of the future.

Julia Thaler is a full professor of Public Management at the Universität der Bundeswehr München, Germany. She holds a doctoral degree and a habilitation from the University of Mannheim. Her research focuses on human resource management, with a special emphasis on questions related to motivation and well-being, and organization management in public and nonprofit organizations as well as in cross-sector collaborations.