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Crossing boundaries at the frontline: examining the link between red tape, leadership and boundary-spanning behaviour

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ABSTRACT

Frontline professionals are increasingly expected to work across organizational boundaries to address wicked problems, yet we know little about the organizational conditions shaping such behaviour. This study examines whether red tape constrains boundary-spanning and whether direct supervisors' leadership mitigates this effect. Using survey data from 940 social care professionals in the Netherlands, we find no significant relationship between red tape and boundary-spanning. Leadership, however, is positively associated with boundary-spanning, both through support and role modelling. These findings suggest that managerial interventions via leadership may be more effective in promoting boundary-spanning than structural efforts to reduce red tape.

TRANSLATED ABSTRACT (DUTCH)

Van uitvoerend professionals wordt steeds vaker gevraagd dat zij over organisatiegrenzen heen werken om complexe, zogenoemde 'wicked problems' aan te pakken. Er is echter nog beperkt inzicht in welke organisatorische omstandigheden dergelijk netwerkgedrag belemmeren of juist bevorderen. Dit artikel onderzoekt de relatie tussen ervaringen van overbodige regels en procedures (red tape) en netwerkgedrag van professionals. De verwachting is dat regeldruk dit netwerkgedrag negatief beïnvloedt. Daarnaast analyseren we in hoeverre leidinggevendend dit effect kunnen dempen. Op basis van surveyonderzoek onder 940 professionals uit wijk- en jeugdteams in Nederland vinden we geen significant verband tussen ervaren regeldruk en netwerkgedrag. Leiderschap blijkt daarentegen wél significant samen te hangen met netwerkgedrag van professionals, zowel door professionals te ondersteunen als door voorbeeldgedrag te tonen. Deze bevindingen suggereren dat managementinterventies via leiderschap effectiever kunnen zijn in het stimuleren van organisatie-overstijgende samenwerking dan structurele ingrepen gericht op het verminderen van regeldruk.

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Introduction

The fragmented and decentralized nature of public service delivery increasingly requires frontline professionals to work across organizational and professional boundaries (Stephens, van Steden, and Schoonmade 2024). This necessary external engagement is captured by the term *boundary-spanning behaviour*, which we define as the set of communication or coordination activities performed by individuals or groups to connect their own unit or organization with external individuals, groups, or entities for the purpose of exchanging information, resources, or knowledge (Williams 2002; Van Meerkerk & Edelenbos 2018a). However, effectively engaging in such *boundary-spanning behaviour* can be challenging. For one, such activities require significant time and effort, often expanding the regular responsibilities of frontline professionals (van Muijden et al. 2025). Additionally, working outside the confines of one's team or organization is inherently difficult, requiring particular collaborative skills (Getha-Taylor 2008; O'Leary, Choi, and Gerard 2012).

Given the importance of boundary-spanning behaviour for service quality (Conteh and Harding 2023), a crucial question becomes what factors facilitate such behaviour. However, while boundary-spanning and networking behaviour often serve as independent variables in relation to organizational or service performance (O'Toole 2015; Van Meerkerk and Edelenbos 2018a), studies on what facilitates such behaviour are relatively sparse (see Marrone et al. 2022; Satheesh et al. 2023). This study, therefore, explicitly asks how to facilitate the boundary-spanning of frontline professionals, focusing on two potentially crucial factors: the impact of *red tape* that frontline professionals experience and the impact of leadership of their direct supervisors. The core research question of this paper is as follows: *What is the relationship between red tape, leadership behaviour of direct supervisors and the boundary-spanning behaviour of frontline professionals?*

Our reasons for zooming in on these factors are their pertinence for the daily work of frontline professionals. *Red tape* refers to the burdensome rules, regulations and procedures that organizational actors must follow (Bozeman 1993) and generally cost frontline professionals a lot of time, energy and frustration (Blom, Borst, and Voorn 2021; George et al. 2021). Boundary-spanning behaviour, which involves coordinating with external actors, inherently requires both discretionary room (to decide when, how and with whom to engage) and substantial time and effort (to identify partners and initiate and sustain contact). Red tape then potentially inhibits

boundary-spanning in two ways. First, it structurally limits the discretionary room necessary for professionals to initiate external contacts (DeHart-Davis and Pandey 2005). Second, it increases *opportunity costs* by consuming time and effort on administrative tasks, thereby reducing the available bandwidth for external engagement (Meier and O'Toole 2010).

Moreover, given the difficulty of boundary-spanning behaviour, we expect such behaviour to require a supportive and encouraging environment. Although the presence of red tape potentially hampers such an environment, we expect the role of leadership behaviour of direct supervisors to be crucial here. Effective leadership is widely acknowledged as a critical enabler of adaptive and proactive employee behaviours (Yukl, 2012). Boundary-spanning behaviour can be categorized as such, given that it is often expected from frontline professionals to be able to perform their core tasks. In addition, we explicitly look at how red tape and leadership work in interaction, believing leadership to have the potential to mitigate negative effects of red tape on boundary-spanning behaviour (cf. Van den Bekerom, Torenvlied, and Akkerman 2017).

We analyse these relationships in the context of social support teams in the Netherlands. These teams were introduced from 2015 onwards in response to new legislation, which decentralized many responsibilities in the domains of care and social support from central to local government. This legislation specifically encourages frontline professionals to work across organizational boundaries and develop solutions that fit the individual circumstances of citizens. However, teams have had considerable difficulties in doing so, often being hampered by substantive levels of red tape in the social care domain (Steijn and Van der Voet 2019). Taking the legislative context and professional domain as a constant, our analysis looks at the extent to which the variation in boundary-spanning activities across teams can be explained by the experienced levels of red tape and the extent of leadership behaviour.

The data were collected using a survey among social support teams in the Netherlands, measuring both the boundary-spanning behaviour of frontline professionals' perceptions of red tape and direct supervisor's leadership behaviours ($n = 940$ professionals working in 86 teams). Based on a multilevel regression analysis, results show that red tape has no effect on levels of boundary-spanning, while leadership behaviour does. In that sense, the results provide evidence that leadership is likely a crucial factor to encourage boundary-spanning behaviour of frontline professionals. Still, an exploratory analysis on the interaction between leadership and red tape suggests that the effects of red tape on boundary-spanning may vary greatly, warranting the need for further research on this relationship.

Our study adds to a literature that still has a limited understanding of the conditions that facilitate boundary-spanning behaviour. The few studies that

do so primarily focus on the competencies of direct supervisors (Kislov, Hodgson, and Boaden 2016), institutionalized managerial support (Klindt, Baadsgaard, and Jørgensen 2024), or the *internal* network behaviour of frontline professionals (e.g. advice seeking from a colleague) (Nisar and Maroulis 2017; Siciliano 2017). By focusing on red tape, we broaden the scope of factors that may impact boundary-spanning behaviour. Moreover, our study specifies what leaders can do to enable their employees to engage in boundary-spanning behaviour. Specifically, we show that different types of leadership can help facilitate the boundary-spanning behaviour of frontline professionals, something that is increasingly needed given the complex and multifaceted context in which these professionals have come to operate. This study therefore makes theoretical contributions that are also actionable for practitioners.

This paper starts out with a theoretical framework in which we describe the changed nature of service delivery that forces frontline professionals to increasingly engage in boundary-spanning behaviour. From there, we argue why, for many professionals, such external activities can be difficult to do, providing the basis for hypotheses on what conditions potentially explain variation in the extent to which frontline professionals engage in boundary-spanning behaviour. A separate section explains our study design and specifies the model with which hypotheses are tested. After presenting the results, a conclusion and discussion sketch out both the practical and theoretical implications of our findings.

Theoretical framing

Why would frontline teams engage in boundary-spanning?

There is a consensus in the public management literature that the nature of public service delivery has changed in recent decades. Many countries have witnessed a shift from the direct provision of goods and services by traditional structures of public administration (i.e. big bureaucracies) towards a more networked and decentralized form of service delivery (Heinrich, Lynn, and Milward 2010). Notions of ‘third party’, ‘collaborative’ or ‘hybrid’ governance have increasingly found their way into both academic literature and communities of practice (Aoki, Tay, and Rawat 2024; Brinkman et al. 2024; OECD 2023).

Although questions remain about the extent to which networked structures have really replaced traditional hierarchical structures or whether collaborative forms of service delivery are actually more effective, it seems clear that the daily work of frontline professionals has changed considerably (Considine and Lewis 2012; Stephens, van Steden, and Schoonmade 2024). Frontline professionals increasingly find themselves in collaborative settings

in which they establish and maintain informal networks to help them cope with the complexity of their daily work (Cohen and Cohen 2023). Crossing organizational and professional boundaries is an everyday reality of frontline professionals operating in ‘the collaborative era’ of public service delivery.

To illustrate, consider a frontline professional who works in the social care domain. They may encounter a family that was referred to the team after the eldest child began skipping class and the younger child showed anxiety issues. During an intake, the professional establishes that the root cause of these issues could be traced back to (financial) stress from the father’s unemployment and substance abuse. This requires the frontline professional to involve debt relief workers, contact the labour market agency for employment support and refer the father to the GP for addiction treatment. For effectively addressing the complex, interconnected problems of this one family, frontline professionals are required to extensively engage in networking and coordination activities.

Such activities range from exchanging information about citizen groups, seeking advice on difficult cases, finding adequate channels for referrals, lobbying managers and municipal officials to alter policy or free up more capacity or resources, or actively engaging with citizen groups who are the intended beneficiaries of delivered services. External (network) activities thus help professionals gain access to knowledge, resources, support and innovative ideas. Moreover, informal coordination allows frontline professionals to better coordinate their activities with professionals from other service domains, avoiding duplication and ultimately improving service delivery for citizens.

Scholars have described such external activities in terms of *boundary-spanning* behaviour (Schotter et al. 2017; Van Meerkerk and Edelenbos 2018b). This boundary spanning typically involves crossing organizational, policy, cultural, or other types of boundaries through a set of communication or coordination activities. Within a public service delivery context, such boundary spanning has the purpose of integrating activities across policy or service domains, often separated by the ‘stovepiping’ of governmental functions (Christensen and Lægreid 2007). Various studies report on the positive impact effective boundary spanning can have on the quality of service (Ebers and Maurer 2014; Satheesh et al. 2023).

However, boundary spanning is not easy, and the extent to which individual professionals and frontline teams engage in boundary-spanning behaviour clearly varies (Ancona 1990; Van Meerkerk and Edelenbos 2018b). To explain variation in boundary spanning, several public management studies focus on necessary collaborative competencies, linking these competencies to a variety of personality characteristics (Getha-Taylor, Blackmar, and Borry 2016; O’Leary, Choi, and Gerard 2012). Although such studies help explain some of the variation in

boundary-spanning behaviour, they neglect the organisational setting in which frontline professionals operate. Moreover, beyond training and hiring recommendations, it provides us with little guidance on how such boundary-spanning behaviour can be facilitated through managerial behaviour and the organisational settings from which frontline professionals operate (Marrone et al. 2022).

In addition to individual-level characteristics, we argue that frontline professionals must be facilitated to engage in boundary-spanning behaviour by the internal dynamics and setting of the organization (McGuire and Silvia 2010; Van der Heijden 2023). Within and beyond the organizational setting, many potential factors contribute to levels of boundary-spanning behaviour. The nature of the organization's social-political environment will dictate the necessity and opportunity for boundary-spanning behaviour. While some environments may actively encourage boundary-spanning given integrated policy goals, competition between service providers or bureaucratic turf wars may actively disincentivize collaboration (Lee, Feiock, and Lee 2012; An and Tang 2023). Moreover, the operational requirements imposed by the organization's core technology will likely affect the nature of boundary spanning (e.g. dealing with standardized inputs vs. complex client needs that require expert-driven coordination) (Thompson 1967; Elston, MacCarthaigh, and Verhoest 2018). Finally, the organization's internal culture can also be a causal factor, either encouraging openness and external engagement or hampering it through norms that favour isolation or strict adherence to existing procedures (O'Leary and Vij 2012).

While these broader contextual factors are undeniably influential, our study focuses on the proximate and actionable variables that directly impact the daily activities of frontline professionals. Following the distinction between more *distant* versus more *proximate* stimuli in the context of organizational behaviour (Johns 2006), we specifically concentrate on red tape and the direct supervisor's leadership behaviour. Given the well-documented prevalence of red tape in the public sector and the work of frontline professionals (Blom, Borst, and Voorn 2021; George et al. 2021), we explicitly expect this factor to similarly play a crucial role in the external activities of frontline professional. Moreover, we suggest that leadership is vital, both directly and indirectly, in terms of mitigating the potentially negative effects of red tape on boundary spanning. Given the direct contact between frontline professionals and their direct supervisors, such leadership likely represents a clear proximate stimulus to boundary-spanning behaviours as well.

Our justification for focusing on these two variables is thus threefold. First, they are the most proximate contextual factors encountered by frontline professionals. Second, compared to more overarching contextual conditions like the core technology or the broader social-political

environment, they are highly *actionable* managerial levers that can be directly influenced through organizational policy or managerial action. Third, examining their combined effects addresses a key conceptual gap in understanding the internal mechanisms that shape external engagement (Van Meerkerk & Edelenbos 2018b). The specific relationships between boundary spanning, red tape and leadership are explored in more detail below.

Red tape

Public sector organizations typically operate in the context of constitutional law and liberal democracy, mandating administrative accountability and due process. Rules and formal procedures often function as the necessary instrument to ensure predictability, consistency and the equitable treatment of citizens (Goodsell 2004). They help safeguard citizens against the arbitrary exercise of bureaucratic power and form the basis for legitimate executive action (Bozeman and Scott 1996). However, these same rules can – through their accumulation, redundancy, or inherent complexity – transcend their original purpose and actively become a complicating factor. It is in this transition that the concept of *red tape* becomes useful.

Red tape is typically described as excessive, time-consuming rules or procedures that lack a clear purpose (Bozeman 1993; Pandey and Kingsley 2000). While functional rules are essential, red tape describes rules that have become excessive, potentially working against organizational goals or purpose. Various studies focus on the prevalence of red tape in service provision contexts (Kaufmann & Tummers 2017), making it a relevant concept for studying the frontline professionals central to this study. Across sectors, frontline professionals consistently report that excessive and often meaningless rules hinder their work (George et al. 2021).

There is a broad literature that associates red tape with various organizational and individual outcomes. Most generally, several empirical studies show how red tape negatively impacts organizational performance (Brewer and Walker 2010; Jacobsen and Jakobsen 2018). The mechanism underlying this relationship is that red tape is assumed to have a constraining effect on organizational practices and managerial behaviour (Blom, Borst, and Voorn 2021). Administrative procedures may hinder managers from providing adequate support to employees, from rewarding or punishing good or poor performers, and in recruitment. Moreover, red tape makes it harder for managers to obtain useful performance information in a timely manner (Pandey, Coursey, and Moynihan 2007).

Beyond managerial behaviour and organizational practices, red tape also affects individual employees and frontline professionals (Bernards et al. 2023; George et al. 2021). This primarily has to do with the consideration that red tape provides a compliance burden for professionals,

taking up time and resources (Jacobsen and Jakobsen 2018) and chipping away at their autonomy (Quratulain and Khan 2015). Empirical studies link red tape to individual outcomes, such as job satisfaction, organizational commitment and motivation (Blom, Borst, and Voorn 2021). Such outcomes ultimately also affect the behaviour of employees and frontline professionals, potentially resulting in a lower quality of provided services.

Given the pervasiveness of these effects of red tape, we also expect perceptions of red tape to play an important role in the boundary-spanning behaviour of frontline professionals. Two mechanisms underlie this relationship. First, boundary-spanning activities often require professionals to make use of discretionary room, for instance, in deciding to contact and coordinate with particular external actors. *Red tape* can limit such discretionary room (DeHart-Davis and Pandey 2005; Quratulain and Khan 2015), e.g. through an overly strict prescription of what professionals should, and should not, do, thereby limiting frontline professionals' autonomous motivation. This mechanism can be substantiated by self-determination theory (Deci and Ryan 1985), which states that autonomy is essential for intrinsic motivation and as such for proactive behaviour. When red tape reduces a professional's sense of autonomy, they are less likely to engage in extra-role behaviour. In this way, red tape can also negatively affect boundary-spanning, as professionals may feel less freedom or autonomy to engage in such behaviour (Jacobsen and Jakobsen 2018).

Second, boundary-spanning behaviour involves *opportunity costs* (Agranoff 2007; Meier and O'Toole 2010), i.e. the amount of time spent outside of the organization cannot be spent inside the organization and vice versa. In other words, external activities always come at the cost of internal activities. Professionals who are internally confronted with red tape will potentially lose a lot of time following rules and procedures or doing administrative tasks, meaning that they will have less time left to externally engage in the additional activity of boundary-spanning behaviour. Being forced to register redundant client information or to follow procedures that are not applicable to the client at hand takes up time and may demotivate professionals (Van Loon 2017). Such time cannot be spent on navigating the outside environment and contacting and interacting with external actors. Hence, we expect that:

Hypothesis 1: Higher levels of perceived red tape will be negatively associated with boundary-spanning behaviour of frontline professionals

Leadership

The interactions between frontline professionals and their managers have long been approached as difficult, following Lipsky's (1980) remarks that

managers and professionals have an inherently conflictual relationship. Based on principal-agent theory, managers were seen as more or less powerless actors given information asymmetry and goal conflict that may exist between professionals and their managers (Evans 2010), as well as other work conditions that may limit the exercise and effect of leadership (Brodkin 2011).

More recent studies, however, have shown that direct supervisor's leadership influences the behaviour and work of frontline professionals (Bernards 2023; Keulemans and Groeneveld 2019; Schubad et al. 2025; Zhang et al. 2022). Scholars have underscored the importance of taking social dynamics into account when studying frontline professionals' work (Møller 2021; Visser and van Hulst 2023), including the social relationship between professionals and their supervisors (Maynard-Moody and Musheno 2003). Leadership, in this context, can thus be seen as behaviour aimed at influencing processes that improve performance and public value creation (Van Osch, Groeneveld, and Kuipers 2024). In addition, leadership in a frontline context is relational, tapping into professional norms and knowledge and being service-oriented (Møller and Grøn 2023).

Different concepts have been used to capture leadership at the frontlines. Among the most dominant ones has been transformational leadership (Zhang et al. 2022; Keulemans & Groeneveld 2019), though sometimes only the visionary dimension of this leadership theory is used (Hansen and Pihl-Thingvad 2019; Klijn, De Boer, and Eshuis 2022; Van der Voet and Steijn 2021). More recently, new concepts such as street-level leadership (Møller and Grøn 2023), professional development leadership (Lund 2022) and transversal leadership (Grøn et al. 2024) have entered the public administration domain to study the impact of leadership on frontline professionals. While there is thus no widespread agreement on what leadership perspective to take to study frontline professionals, there seems to be at least some degree of consensus about what leadership in a frontline context entails, that is, that leadership is relational, aimed at supporting and facilitating subordinates (Møller and Grøn 2023).

We build on the work of Yukl (2006, 2012), who defined leadership behaviour as *'the process of influencing others to understand and agree about what needs to be done and how to do it, and the process of facilitating individual and collective efforts to accomplish shared objectives'* (p. 6). Following Yukl (2012) and other studies (i.e. Nielsen et al. 2019), we hypothesize that different leadership behaviours can complement and even augment each other. In this study, we expect that the boundary-spanning behaviour of frontline professionals is affected by two different leadership behaviours: supportive leadership behaviour and networking leadership behaviour.

We focus on direct supervisors, following Gassner and Gofen (2018), who highlighted the importance of distinguishing between leadership at different levels. As direct supervisors are the closest colleagues of frontline professionals, we expect that these are the people that professionals turn to when uncertain about how to act (Bernards 2023), in addition to being assigned a leadership role through formal authority over resources and task assignments (Keulemans and Groeneveld 2019).

Supportive leadership behaviour. First, in providing a fruitful setting for boundary-spanning behaviour, direct supervisors inevitably play an important role. When leaders create direction about what organizational goals to follow, and align internal structures with the external surroundings (McGuire and Silvia 2010), this creates the necessary space for frontline professionals' autonomy to show proactive behaviour such as boundary spanning (Den Hartog and Belschak 2012). Direct supervisors who provide support to use discretionary room, i.e. encouraging team self-management and providing latitude to act independently, create a mandate for professionals to engage in external network activities without having them ask, 'Am I allowed to do this?'.

Supportive leadership thus plays a role in facilitating an environment where frontline professionals dare to engage in boundary-spanning (Pirola-Merlo et al. 2002). As said, previous studies show how successful direct supervisors encourage professionals to behave autonomously and act independently from leader interference (Farh and Chen 2018). However, supportive leadership may also consist of different behaviour. For example, recent studies show how coaching behaviour can be important in facilitating boundary-spanning (Marrone et al. 2022). Supportive coaching behaviour consists of the encouragement of professionals to engage in open and honest information exchanges with external partners, and granting authority to professionals to make decisions about external collaboration (Farh and Chen 2018).

Given the nature of boundary spanning, encouraging professionals to act independently likely increases the degree to which they feel comfortable with boundary-spanning behaviour. Furthermore, studies using a transformational leadership perspective on frontline professionals show that individual consideration, thus taking the needs and feelings of individual professionals into account, is an important prerequisite for subordinates to reach their full potential (Northouse 2021). This relates to studies about supportive leadership behaviour, which highlight the importance of empowering professionals to act proactively (Marrone et al. 2022). This leads to our first hypothesis on the effect of leadership:

Hypothesis 2a: Higher levels of experienced supportive leadership behaviour are positively associated with boundary-spanning behaviour of frontline professionals.

Networking leadership behaviour. Second, leaders can signal the importance of boundary-spanning behaviour by explicitly engaging in external activities themselves. The importance of role-modelling behaviour has been extensively studied in leadership studies, including studies on the effects of direct supervisors on frontline professionals. For example, Keulemans and Groeneveld (2019) show that direct supervisors sometimes function as attitudinal role models to frontline professionals. The idea of leadership as role-modelling behaviour is grounded in social learning theory (Bandura 1977), with the central tenet being that subordinates often emulate the attitudes and behaviours of their leaders. Because of their position, supervisors are often seen as credible role models (Schwarz, Eva, and Newman 2020). In studies using a transformational leadership perspective, role modelling behaviour is described as an idealized influence, thus behaviour by leaders that is congruent with what they expect to see from their subordinates. In addition, direct supervisors could serve as pathfinders for their employees in engaging in boundary-spanning behaviour, for example, by initiating contacts between their employees and external parties (Grøn et al. 2024). Consequently, our second hypothesis on the effect of leadership is:

Hypothesis 2b: Higher levels of experienced networking leadership behaviour are positively associated with boundary-spanning behaviour of frontline professionals.

Indirect effect of leadership behaviour

Importantly, beyond the direct effects of red tape and leadership behaviour, these factors are also likely to work in interaction. Drawing on the Job Demands – Resources (JD-R) framework, leadership can function as a job resource that mitigates the negative effects of job demands (i.e. red tape) on employee outcomes (Breevaart and Bakker 2018). We argue that this buffering mechanism operates through psychological empowerment. Psychological empowerment refers to a motivational state in which employees wish and feel able to shape their work role and context. It is characterized by the perception of meaning, competence, self-determination and impact (Spreitzer 1995). Employees who experience such empowerment perceive greater autonomy and control over their work and are therefore more likely to respond proactively to constraints.

Supportive leadership can foster psychological empowerment by encouraging discretion, expressing confidence in employees' capabilities and stimulating autonomous problem-solving (Bernards 2023). This could be

particularly helpful for professionals who have to navigate a work context characterized by rules and red tape. When supervisors signal trust and grant room for discretion, employees are more likely to perceive themselves as competent and self-determining actors. As a result, red tape is less likely to be interpreted as a rigid constraint and more as a manageable aspect of the organizational environment. In this sense, supportive leadership is expected to weaken the negative effect of red tape on boundary-spanning behaviour (Van den Bekerom, Torenvlied, and Akkerman 2017) by enhancing professionals' psychological empowerment. Empowered professionals are better able to navigate these constraints and remain willing to engage in boundary-spanning behaviours to achieve substantive goals.

We expect this effect particularly for supportive leadership, rather than for networking leadership, because supportive leadership is especially focused on encouraging professionals to act independently. We expect this interaction between supportive leadership and red tape to work as an indirect effect, in which supportive leadership has a dampening effect on the impact of red tape on boundary spanning among professionals. This leads to our third hypothesis:

Hypothesis 3: The negative association between red tape and boundary-spanning behaviour of frontline professionals will be weaker when experienced supportive leadership behaviour is high, and stronger when experienced supportive leadership behaviour is low.

The complete theoretical model is shown in [Figure 1](#).

Research design and data analysis

Research setting

This study is situated in the context of social support and youth care teams in the Netherlands. These teams were established in the Netherlands in response to new legislation, which decentralized many responsibilities in

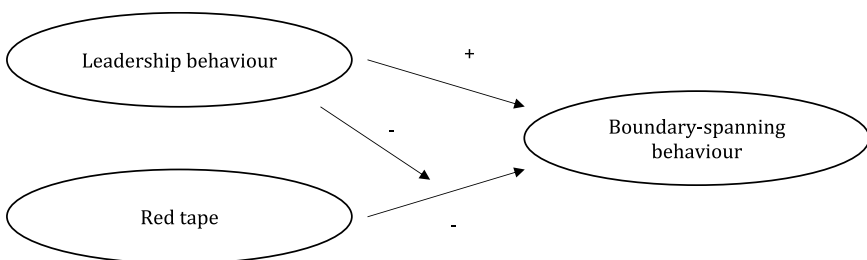


Figure 1. Conceptual model.

the domains of care and social support from central to local government as of 2015. Important for this study is that this legislation specifically encourages frontline professionals to work across organizational boundaries and to provide services that transcend the compartmentalization that often characterizes these domains (Ministerie van Volksgezondheid, Welzijn en Sport 2015, 60). In doing so, professionals are encouraged to come up with solutions that fit the individual circumstances of citizens. At the same time, the decentralizations have created a situation in which professionals work under a myriad of rules and regulations: they must adhere to national legislation, national and municipal policy rules, and organizational rules and procedures (Kromhout, Van Echtelt, and Feijten 2020).

As national legislation actively encourages boundary-spanning behaviour by frontline professionals, this may be considered a least-likely case for finding a negative effect of red tape on boundary-spanning. The findings from this study, therefore, may be particularly significant (Flyvbjerg 2006). If frontline professionals in this relatively conducive environment are still limited in their boundary-spanning behaviour due to red tape, the implications for contexts where this behaviour is not actively encouraged are likely even stronger.

Data collection

Data collection took place in the winter of 2022–2023. The data were collected using an online survey among professionals and their direct supervisors in five Dutch municipalities. A total of 2,065 employees working for 86 teams were approached to participate in the study. The final response is 940 professionals (45.5%).

The average age of respondents was slightly over 41 years. With regard to age distribution, 34.6% of the respondents were younger than 35 years, 47.5% were between 35 and 55 years and 17.9% were older than 55 years. This distribution corresponds well with the age composition of the broader Dutch health and social care sector, in which 35.2% of workers are under 35 years, 40.1% are between 35 and 55 years and 24.7% are older than 55 years (CBS - StatLine 2023). Most respondents had obtained a Bachelor's degree (82%) or a Master's degree (16%) as their highest qualification. Women constituted 87% of the sample, which is slightly higher but broadly comparable to the gender composition of the wider health and social care sector in the Netherlands, where 81% of employees are female (CBS - StatLine 2023). Respondents had, on average, a little over 13 years of work experience.

Moreover, the data were collected among professionals working in social support and youth care teams, which represent the dominant organizational model for the provision of social care in the Netherlands. Approximately 80% of Dutch municipalities organize social care through such teams (Van

Arum, Van Rooijen, and Kros 2023). Taken together, the demographic characteristics of the sample and the widespread use of this organizational model suggest that the data are reasonably representative of the population of social care workers in the Dutch context.

Measures

Boundary-spanning behaviour. Boundary-spanning behaviour was measured using four items based on the scale of Ancona and Caldwell (1992), which were contextualized to the work of the social support teams. The items are as follows: *‘Our team reaches out to relevant stakeholders in the neighbourhood’*; *‘Our team informs relevant parties in the neighbourhood about our approach’*; *‘Our team proactively seeks advice or support from relevant parties in the neighbourhood’*; *‘Our team persuades relevant stakeholders in the neighbourhood of the importance of our activities’*.

Red tape. Red tape perceptions among professionals are measured using four items from the scale of Van Loon et al. (2016). The items used are as follows: *‘The rules and procedures that I have to comply with in my work . . . cause much pressure at work’*; *‘. . . take a lot of time to comply with’*; *‘. . . cause much delay’*; *‘. . . cause a lot of frustration’*.

Leadership behaviour. We used Yukl’s (2012) Managerial Practices Survey (MPS) 17 to measure supporting and networking leadership behaviours. This work by Yukl (2012) has been used in many studies and offers the opportunity to measure theoretically distinct leadership behaviours.

The following three items were used to measure supportive leadership: *‘My direct supervisor . . . shows concern for the needs and feelings of team members’*; *‘. . . is considerate and supportive with members of the work unit’*; and *‘. . . provides support and encouragement when there is a difficult or stressful task’*.

To assess networking leadership, we used these three items: *‘My direct supervisor . . . builds and maintains a wide network of contacts among peers and outsiders’*; *‘. . . develops cooperative relations with people who can provide resources and assistance to the work unit’*; and *‘. . . uses social networks, professional groups, and outside contacts to get useful information’*.

We measured employee perceptions of direct supervisor’s leadership behaviour, as previous research has shown that leaders generally overrate their leadership practices and that only employee-perceived leadership practices are related to employee performance outcomes (Jacobsen and Andersen 2015).

All the survey items above were measured using a 5-point Likert scale ranging from ‘1’ strongly disagree to ‘5’ strongly agree.

To assess the construct validity of the scales, we conducted a confirmatory factor analysis (CFA) using structural equation modelling (SEM) in Stata 18. All items for red tape (four items), networking leadership (three items), supportive leadership (three items) and boundary-spanning behaviour (four items) were included simultaneously in a four-factor model, with each item loading on its intended latent construct (see Table A1 in the Appendix).

All standardized factor loadings were high and statistically significant (loadings range between .80 and .92, $p < .001$). These values indicate good *convergent validity*. Table A2 in the Appendix indicates a good fit of the four-factor model to the data (χ^2 (71) = 298.53, CFI = .977, TLI = .970, RMSEA = .058, SRMR = .029), where we use generally accepted cut-off criteria of $>.95$ for CFI and TLI, $<.06$ for RMSEA and $<.08$ for SRMR (MacKenzie, Podsakoff, and Podsakoff 2011).

The correlation between both factors of leadership was strong ($r = 0.703$, $p < .001$), reflecting that these behaviours often co-occur in practice. The distinction between these constructs was theoretically driven and based on Yukl (2012). Still, to demonstrate *discriminant validity*, we calculated the AVE for both networking leaderships (.752) and supportive leadership (.799). The square root of both AVE values (.867 and .894) is considerably higher than the observed correlation between both factors (.703), which according to the Fornell-Larcker Criterion demonstrates *discriminant validity* (Fornell and Larcker 1981).

In addition, we assessed the internal consistency of the constructs by calculating composite reliability. All constructs exceed the commonly accepted threshold of .70, indicating satisfactory reliability. Composite reliability was .90 for boundary-spanning, .91 for red tape, .92 for supportive leadership and .90 for networking leadership (see Table 1).

Control variables. Professionals' years of experience and gender are included as a control variable, given that these variables are potentially associated with both independent and dependent variables (see, e.g., Bernards, Schmidt, and Groeneveld 2024). In addition, to account for municipal context, we added dummy variables for the five municipal settings from which our data is drawn with the largest municipality serving as the reference category.

Table 1. Descriptive statistics and correlations ($N = 940$ professionals).

	Mean	SD	AVE	CR	1	2	3	4	5	6
1 Boundary-spanning	4.02	.75	.69	.90	1					
2 Red tape	3.55	.92	.71	.91	.025	1				
3 Supportive ls	4.29	.92	.80	.92	.428**	-.060	1			
4 Networking ls	4.08	.86	.75	.90	.477**	-.004	.703**	1		
5 Experience	13.52	10.44	NA	NA	.009	.117**	.002	-.049	1	
6 Gender (1 = female)	.87	NA	NA	NA	-.052	.016	.052	-.005	.046	1

* $p < .05$; ** $p < .01$.

Analytical strategy

We use a multi-level regression analysis with random effects in Stata 18, as the data have a hierarchical structure with individuals nested within teams (Hox, Moerbeek, and Van de Schoot 2017). Mean centring was used for the independent variables when examining the interaction effects. Although the survey items refer to boundary-spanning activities of the team, the level of observation is individual and the measure therefore captures individual perceptions of these activities rather than a shared team-level construct. This is supported by low ICC values, indicating substantial within-team variation in how boundary-spanning is perceived. Such variation is theoretically meaningful, particularly in social support teams where boundary-spanning tasks are often unevenly distributed across roles. Aggregating to the team level would therefore obscure important individual differences and substantially reduce statistical power. A multilevel model allows us to retain individual-level variation while accounting for the non-independence of observations through random intercepts at the team level.

Analysis

Table 1 provides an overview of the descriptive statistics. It is worth noting that a fairly strong positive correlation exists between the two leadership behaviours (.703, $p = .000$). In addition, both leadership behaviours are moderately and strongly positively correlated with boundary-spanning behaviour of professionals (.428, $p = .000$ and .477, $p = .000$ for supportive and networking leadership, respectively). Also note that given the relatively high mean score of our dependent variable (4.02 on a scale from 1 to 5), we should consider the potential that ceiling effects hamper the detectability of findings.

Table 2 shows the results of a multi-level regression analysis predicting boundary-spanning behaviour ($N = 940$ professionals in 86 teams). First, the results show that there is no significant relationship between red tape and boundary-spanning behaviour (coefficient = .019, $p = .425$). Consequently, we have to reject hypothesis 1, which expected a negative association between red tape and boundary-spanning behaviour.

Second, the results show a significant, positive association between supportive leadership and boundary-spanning behaviour (coefficient = .178, $p = .000$) and between networking behaviour of direct supervisors and boundary-spanning behaviour (coefficient = .288, $p = .000$). Thus, we corroborate hypotheses 2a and 2b.

Third, we do not find a statistically significant interaction effect of red tape and supportive leadership on boundary-spanning behaviours (coefficient = $-.038$, $p = .075$). Consequently, we have to reject hypothesis 3.

Table 2. Results of a multi-level regression analysis predicting boundary-spanning behaviour ($N = 940$ professionals in 86 teams).

	Model 1			Model 2			Model 3		
	<i>Coeff.</i>	<i>S.E.</i>	<i>p-value</i>	<i>Coeff.</i>	<i>S.E.</i>	<i>p-value</i>	<i>Coeff.</i>	<i>S.E.</i>	<i>p-value</i>
Intercept	2.800	.147	.000	2.826	.147	.000	2.903	.155	.000
<i>Ind.-level predictors</i>									
Red Tape (RT)	.029	.023	.208	.027	.023	.241	.019	.024	.425
Supp. Leadership (SL)	.169	.033	.000***	.171	.033	.000***	.178	.034	.000***
Networking	.298	.035	.000***	.293	.035	.000***	.288	.035	.000***
<i>Leadership</i>									
RT * SL (interaction)				-.040	.022	.061	-.038	.022	.075
Experience							.002	.002	.364
Gender							-.154	.063	.014*
<i>Team-level controls</i>									
Dummy Municipality B							-.309	.119	.011*
Dummy Municipality C							.099	.122	.421
Dummy Municipality D							-.167	.086	.057
Dummy Municipality E							-.113	.066	.093
R Square Within	.240			.244			.253		
R Square Between	.268			.255			.344		
R Square Overall	.246			.249			.269		
Sigma U	.164			.164			.156		
Sigma E	.637			.636			.632		
Rho (ICC)	.062			.063			.057		
LRT (cf. null)	259.33		.000	262.91		.000	282.87		.000
AIC	1893.368			1870.371			1858.049		
BIC	1922.443			1904.292			1921.017		

* $p < .05$; ** $p < .01$; *** $p < .001$.

Regarding our control variables, the results show that gender is negatively associated with boundary-spanning behaviours (coefficient = $-.154$, $p = .014$), meaning that women generally engage less in boundary-spanning. Still, the unequal distribution of gender (87% women) warrants caution in drawing too strong conclusions about this gender effect in boundary-spanning. Finally, model 3 shows a significant difference for one of the municipalities in the amount of boundary-spanning behaviour, although these differences do not attenuate the observed relationship between perceived leadership behaviour and boundary spanning.

Exploratory analysis of interaction effect

Although not significant at the .05 threshold, the interaction coefficient warrants further investigation (coefficient = $-.038$, $p = .075$). We further probed this interaction using a slope analysis and calculated the Johnson-Neyman (J-N) interval (see Preacher, Rucker, and Hayes 2007). A J-N analysis can identify a specific ‘zone of significance’ which describes an interval of moderator values at which the relationship between core variables becomes significant. However, given the multiple comparison problem in probing interaction effects (Esarey and Sumner 2018) and the

non-significance of our overall interaction term, we primarily treat the results below as *exploratory*.

In Figure 2, we plot the slopes of the effect of red tape on boundary-spanning at different levels of supportive leadership. Given the high mean value of supportive leadership ($M = 4.29$, $SD = 0.92$), we plotted these slopes at the 10th, 50th and 90th percentiles rather than at $\pm 1SD$, to avoid extrapolated values. The slopes of the different lines indicate that the relationship between red tape and boundary-spanning is positive at lower levels of supportive leadership (positive slope of the 10th percentile line) and flattens at higher levels of the moderator (50th and 90th percentile lines), even trending towards the negative.

Given that the predicted values of boundary-spanning cluster at the upper-bound of the 5-point scale, a *ceiling effect* likely attenuated the overall interaction effect and restricted the model's ability to detect meaningful differences in boundary-spanning for the respondents who already perceive high levels of supportive leadership. Still, the J-N interval indicates that the relationship between red tape and boundary-spanning is significant between a threshold value of -1.47 and -3.90 in levels of supportive leadership (on a mean-centred scale). Given that the observed range of supportive leadership spans from -3.29 to $+0.71$, this suggests that for respondents perceiving low levels of supportive leadership, red tape and boundary-spanning have a significant association.

Figure 3 provides a plot of the slopes of red tape at low (-1.29), medium ($+0.38$) and high ($+0.71$) levels of supportive leadership and its according

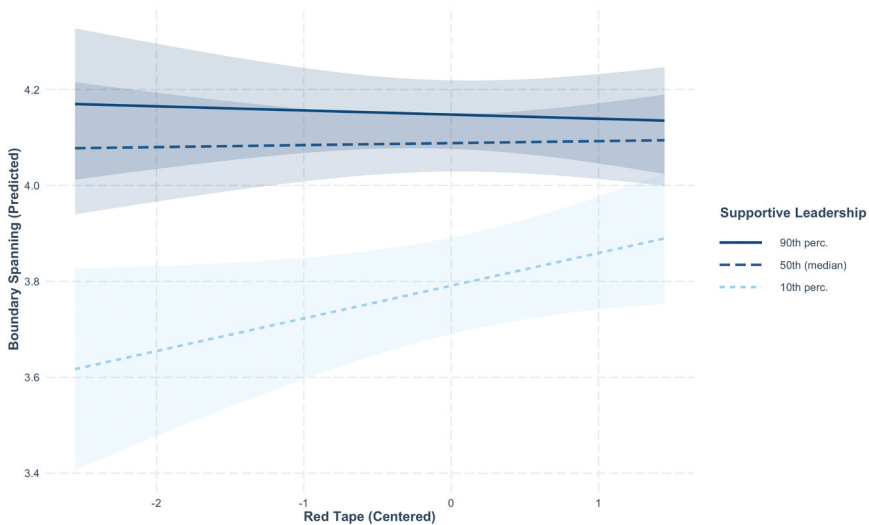


Figure 2. Interaction between red tape and supportive leadership.

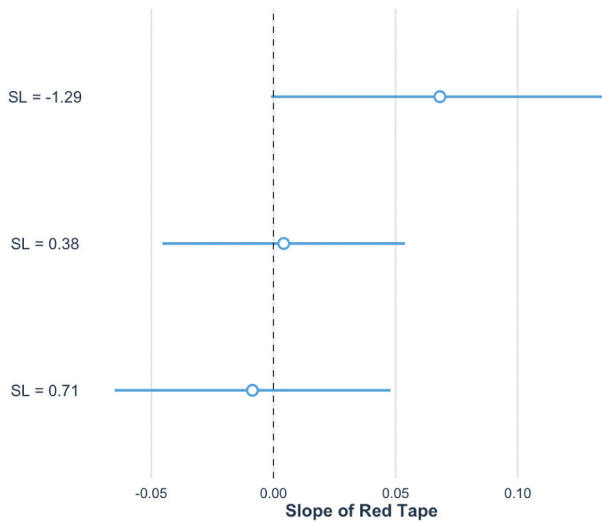


Figure 3. Simple slopes of red tape on boundary-spanning behaviour at different levels of supportive leadership (SL, mean-centred values).

significance based on 95% confidence intervals. Where the confidence intervals do not cross the vertical zero line, the association between red tape and boundary-spanning is significant. While the specific points visualized in Figure 3 remain non-significant, the J-N analysis shows that the association reaches a significance at the -1.47 threshold. However, consistent with the non-significant interaction term in our main model, these effects are confined to specific subgroups in our data and should be interpreted as exploratory.

Discussion and conclusion

Frontline professionals are increasingly stimulated to work across organizational and professional boundaries. Scholars have argued that both structural and relational factors may impact boundary-spanning behaviour (Van Meerkerk and Edelenbos 2018b). Our article provides an analysis of the impact of red tape and supportive and networking leadership on frontline professionals' boundary-spanning behaviour. While there is no relationship between red tape and boundary-spanning behaviour of professionals, we do see positive and significant associations between supportive and networking leadership and boundary-spanning. These findings have several important theoretical implications.

First, this article shows that leadership is important for facilitating boundary-spanning behaviour among employees. Our findings show that

supportive leadership is important as it provides professionals with the latitude to act independently and encourages self-management, fostering an environment where employees feel empowered to engage in external networking activities without hesitation. Moreover, networking leadership is important: we find that when direct supervisors show much boundary-spanning behaviour themselves, frontline professionals in their teams also show higher levels of boundary-spanning behaviour. This can thus be a form of leading by example, i.e. by engaging in much networking behaviour themselves, direct supervisors show that they find this behaviour important, and frontline professionals may mimic this behaviour. The theoretical implication of this finding is that it supports for the importance of ‘walking the walk’ rather than ‘talking the talk’ (Bass 1990). Earlier studies have found that leaders who are seen as exemplifying and who exert idealized influence on subordinates can elicit what is deemed the right type of behaviour (Nielsen et al. 2019).

However, beyond role modelling, there are other possible explanations why networking leadership is most strongly associated with boundary-spanning behaviour. By engaging in networking behaviour, direct supervisors may establish contacts that pave the way for frontline professionals to engage with external actors (Ansell and Gash 2012). In this case, direct supervisor’s boundary-spanning behaviour might enable frontline professionals to work together with external parties as well. Networking leadership does not include the more traditional relationship-oriented supportive behaviour as developed by Yukl (2012) but may still play a facilitating role.

Second, our analysis did not yield evidence for an effect of red tape on boundary-spanning behaviour. However, the exploratory analysis of the interaction between red tape and supportive leadership suggests that red tape may even foster boundary-spanning, particularly when supportive leadership is low or absent. One possible explanation could be that frontline professionals who are being frustrated by *internal* red tape could be driven to engage in *external* activities to actually make a difference. In the absence of supportive leadership, boundary-spanning is then a potential coping strategy to deal with excessive amounts of red tape. From a Job Demands Resources (JD-R) perspective (Bakker, Demerouti, and Sanz-Vergel 2023), this potentially suggests a nuanced *substitution effect* in the relationship between red tape and supportive leadership. Although our findings suggest that supportive leadership functions as a crucial ‘job resource’ to facilitating boundary-spanning, in the absence of such leadership, red tape may transition from a hindrance job demand to a catalyst for external engagement. In these instances, frontline professionals may engage in boundary-spanning to mobilize external resources as a way to bypass the internal rigidities of red tape.

Still, interpreting this interaction requires caution, and we should not overstate this finding. For one, as the J-N interval shows, it only applies to a specific subset of the respondents who perceive the lowest supportive leadership (less than 10%). Moreover, given the high mean levels of both boundary and supportive leadership, a *ceiling effect* may undermine the potential to detect meaningful interactions in the overall analysis. For the vast majority of professionals in the analysis, a facilitative leadership style remains the primary driver of boundary-spanning, rendering the structural constraint of red tape largely irrelevant.

Despite the findings, several limitations should also be noted. First, some of the results may be driven by the specific institutional and policy context in which the teams operate. This study is situated in Dutch social support and youth care teams established following the 2015 decentralizations, which explicitly encourage frontline professionals to work across organizational boundaries and to provide integrated, tailored services for citizens. As a result, boundary-spanning behaviour is not only common but also actively promoted as part of both professional and managerial roles in this context. Comparative studies focused on cross-domain or cross-country effects may help assess the extent to which the results of this study can be generalized.

Second, and related, the relationship between team leaders' role-modelling behaviour and boundary-spanning may partly reflect the contextual demands of specific teams rather than an effect of leadership. In other words, teams in which both the manager and the professionals engage more in boundary-spanning behaviour potentially deal with an environment that requires more external behaviour from both of them, compared to teams in which both direct supervisors and frontline professionals do not engage much in boundary-spanning, for instance, because they operate in neighbourhoods where more clients face complex and intertwined social care needs. Although we tried to control for this by taking into account the municipal context, studies including more specific variables about the context in which teams work can help to explain what causes variation in boundary-spanning behaviour, both among direct supervisors and among frontline professionals.

A third limitation concerns our operationalization of red tape. Our measures primarily capture the compliance burden associated with rules and procedures, rather than the element of dysfunctionality that is equally central to Bozeman's (1993) conceptualization of red tape. Our measure is therefore more closely aligned with earlier notions of bureaucratic constraint, such as excessive paperwork (Bennett and Johnson 1979) or procedural constraint (Hall 1968), and does not explicitly assess whether rules lack a legitimate organizational purpose. As a result, the inclusion of burdensome yet functional rules in our measure may weaken the negative relationship between red tape and boundary-spanning behaviour.

Fourth and finally, it should be noted that our study cannot assess to what extent boundary-spanning behaviour is also beneficial to clients. While we have strong reasons to believe that boundary-spanning is necessary to be responsive to complex citizen needs (Van Meerkerk & Edelenbos 2018a; Satheesh et al. 2023), more boundary-spanning is not necessarily better. Studies on managerial networking report an inverted U-shaped effect on performance, with too high levels of networking being detrimental to performance (Hicklin, O'Toole, and Meier 2008). Such results are often explained by arguing that an increase in focusing outward leads to a decrease in internal focus which, may ultimately harm rather than increase performance. A similar point could be made for boundary-spanning. Sometimes professionals or teams may overly focus on external activities, to the detriment of core operational tasks (i.e. opportunity costs work both ways). Direct supervisors should thus look for a sweet spot of levels of boundary-spanning, dependent on the goal of the team and the needs of their clients. A division of labour with some members focusing more on boundary-spanning activities while others focus primarily on internal core activities might be a way for direct supervisors to find such a balance.

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Ethics approval statement

Data collection for this study has received approval from the Ethical Committee of the Department of Public Administration and Sociology (DPAS) of Erasmus University Rotterdam under reference number 02–20.

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Appendix 1. Results of confirmatory factor analysis

Table A1. Confirmatory factor analysis: standardized factor loadings ($N = 940$ professionals).

Construct	Item	Standardised factor loading
Boundary management	'Our team reaches out to relevant stakeholders in the neighbourhood'	.81***
	'Our team informs relevant parties in the neighbourhood about our approach'	.86***
	'Our team proactively seeks advice or support from relevant parties in the neighbourhood'	.83***
	'Our team persuades relevant stakeholders in the neighbourhood of the importance of our activities'	.83***
Red tape	'The rules and procedures that I have to comply with in my work cause much pressure at work'	.80***
	'The rules and procedures that I have to comply with in my work take a lot of time to comply with'	.90***
	'The rules and procedures that I have to comply with in my work cause much delay'	.86***
	'The rules and procedures that I have to comply with in my work cause a lot of frustration'	.80***
Networking leadership	'My direct supervisor builds and maintains a wide network of contacts among peers and outsiders'	.87***
	'My direct supervisor develops cooperative relations with people who can provide resources and assistance to the work unit'	.90***
	'My direct supervisor uses social networks, professional groups, and outside contacts to get useful information'.	.83***
Supportive leadership	'My direct supervisor shows concern for the needs and feelings of team members'	.90***
	'My direct supervisor is considerate and supportive with members of the work unit'	.92***
	'My direct supervisor provides support and encouragement when there is a difficult or stressful task'	.86***

Note: All loadings are statistically significant at *** $p < .001$.

Table A2. Model fit indices for the four-factor measurement model ($N = 940$ professionals).

χ^2	df	CFI	TLI	RMSEA	SRMR
298.53	71	.977	.970	.058	.029