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Does (professional) leadership matter for staff satisfaction? Evidence from a panel study of hospital boards

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ABSTRACT

Grounded in human capital theory, this study explores whether the presence of professional leaders, such as doctors on hospital governing boards, positively influences the organizational workforce. Drawing on eight years of data from the English NHS, the analysis finds no direct association between professional leadership and staff satisfaction. However, we identify a significant moderating effect attributable to two factors: the managerial experience of professional leaders and the degree of connectedness between board members. These findings highlight the importance of an emerging category of professional leader – the hybrid specialist – who can integrate depth of expertise with breadth of experience.

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KEYWORDS Professional leadership; human capital theory; panel data; staff satisfaction

Introduction

A key strategy for enhancing management effectiveness in public sector organizations has been the integration of professionals into leadership roles (Goodall 2011; Kaiser, Schmid, and Schlüchtermann 2020; Kirkpatrick, Altanlar, and Veronesi 2021). This approach rests on the assumption that bridging the gap between managerial and professional domains will improve organizational performance (Buchanan et al. 2013; Noordegraaf et al. 2016). Accordingly, professionals have routinely been expected to adopt management responsibilities, including tasks such as staff appraisal, planning and budget administration (Kirkpatrick, Zardini, and Veronesi 2023; Noordegraaf 2011). A prototypical case is represented by the medical

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profession, with doctors increasingly exercising leadership over the organizational context of professional work (Freidson 1994; Waring 2014).

Professional leadership can be conceptualized as the ability of individuals with specialized expertise in a specific domain to effectively lead people and manage resources in pursuit of the goals of a (public sector) organization. The underlying rationale primarily lies in the idea that professional leaders can leverage domain-specific expertise to enhance organizational performance (Netra, Sørensen, and Nejstgaard 2022; Sarto, Veronesi, and Kirkpatrick 2019). This proposition is aligned with the predictions of human capital theory (Becker 1964), which links the different knowledge, skills and abilities of individuals to their educational background and training (Datta and Iskandar-Datta 2014). Human capital scholarship often distinguishes between two broad leadership types (Mueller et al. 2021; Netra, Pihl-Thingvad, and Winter 2024): 'specialists', who possess formal education in the field where they manage, for example doctors in hospitals or teachers in schools (Goodall and Bäker 2015; Veronesi, Kirkpatrick, and Altanlar 2015); and 'generalists', who typically hold business or management qualifications, e.g. MBAs, MPAs, etc (Kirkpatrick, Vallascas, and Veronesi 2017; Sarto, Veronesi, and Kirkpatrick 2019). Specialists are thought to offer depth of expertise in a specific field (Chen et al. 2021; Souitaris et al. 2023), whereas generalists are believed to provide breadth of experience and generic management skills (Custódio, Ferreira, and Matos 2013; Ferreira and Sah 2012). Thus, these distinct forms of human capital offer different contributions to organizational leadership (Castanias and Helfat 2001; Mackey, Molloy, and Morris 2014).

Despite the assumptions underpinning human capital theory, the extant evidence on the effectiveness of professional leaders, linked to their formal educational background and training, remains 'bogged down by contradicting empirical findings' (Netra, Sørensen, and Nejstgaard 2022, 1004). In healthcare, prior research finds a positive impact of specialist leaders (mostly doctors) on performance related to core service provision such as quality of care and mortality rates (Goodall 2011; Jiang et al. 2009; Kirkpatrick, Vallascas, and Veronesi 2017; Netra, Pihl-Thingvad, and Winter 2024; Veronesi, Kirkpatrick, and Altanlar 2015; Veronesi, Kirkpatrick, and Vallascas 2013). Some studies also link professional leaders to greater organizational efficiency (Molinari et al. 1993; Veronesi, Kirkpatrick, and Vallascas 2013). Conversely, generalist managers are generally associated with superior operational performance and financial results (Kaiser, Schmid, and Schlüchtermann 2020; Kirkpatrick, Vallascas, and Veronesi 2017). While this ambivalence is confirmed by a recent meta-regression review (Netra, Sørensen, and Nejstgaard 2022), the literature remains relatively sparse, methodologically weak, and concentrated on few performance indicators (Clay-Williams et al. 2017; Kaiser, Schmid, and Schlüchtermann

2020), as well as being grounded in 'tentative' theoretical explanations (Netra, Sørensen, and Nejstgaard 2022).

To address this gap, we follow recent developments in the human capital literature (Mueller et al. 2021; Souitaris et al. 2023) and propose a typology that transcends the rigid dichotomy of the 'full' specialist versus the 'full' generalist: the hybrid specialist professional leader. According to Mueller et al. (2021), traditional binary views of the career development of individuals are neither mutually exclusive nor contradictory (see also Souitaris et al. 2023); rather, a potential trade-off exists between specialization and generalism (Falato, Li, and Milbourn 2015; Lazear 2004). By relinquishing some degree of specialization, individuals can gain in general skills and breadth of experience (Ferguson and Hasan 2013), yielding benefits from an expanded experiential span while forgoing some level of specialization and deeper expertise in a certain domain (Mueller et al. 2021). Essentially, achieving an optimal balance between breadth (generalism) and depth (specialization) enables individuals to maintain a sufficiently broad skills set while preserving a strong foundation of expertise (Dragoni et al. 2011). To the best of our knowledge, only Sarto, Veronesi, and Kirkpatrick (2019) have so far attempted to blend specialisms with generalism in the public sector context, but their study focused on a unique category of medical professional – public health doctors in Italy – whose education and training intentionally combine clinical knowledge with management-oriented competencies.

In the specific case of professional leaders, we contend that the capacity of hybrid specialists to balance depth of expertise with breadth of experience is contingent upon two boundary conditions: the extent of their accumulated managerial experience and the degree of connectedness with other individuals sharing governance responsibilities. The theoretical relevance of managerial experience stems from to the widely acknowledged observation in the human capital literature that managerial resources are 'rare and difficult to acquire' (Castanias and Helfat 1991, 2001), and their progressive accumulation benefits both individuals and organizations (Kor 2003). As such, on-the-job experience is regarded as one of the core learned capabilities underpinning managerial effectiveness (Datta and Iskandar-Datta 2014; Sundaramurthy, Pukthuanthong, and Kor 2014). Conversely, the significance of the degree of connectedness derives from the social capital perspective (Adler and Kwon 2002), which posits that strong interpersonal ties in leadership teams facilitate the exchange of valuable information and knowledge, thereby positively influencing decision-making (Barroso-Castro, Villegas-Periñan, and Casillas-Bueno 2016; Kim and Cannella 2008). A higher degree of connectedness fosters trust and openness (Kor 2003) and promotes effective teamwork and cohesiveness (Sundaramurthy and Lewis 2003).

We posit that the presence of either condition enables hybrid specialists to integrate broad generalist competencies and heterogeneous experiential backgrounds with domain-specific, in-depth professional knowledge. Their capacity to exert a positive influence on board-level decision-making will be enhanced by the relational dynamics embedded within collective leadership configurations. Thus, by combining the predictions of human and social capital theories, we offer a novel theoretical insight which provides a more fully specified and complete understanding of professional leadership and its impact on organizational performance (Mayer and Sparrowe 2013). In doing so, we answer the call from public sector scholars for a better exploration of the theoretical linkages between the formal education and training of professional leaders and organizational performance coupled with the adoption of research designs allowing for better causal inferences of this relationship (Clay-Williams et al. 2017; Kaiser, Schmid, and Schlüchtermann 2020; Netra, Sørensen, and Nejstgaard 2022). Contributing to this debate has also important implications for policy-makers and practitioners, given the impact that professional leaders have not only on organizational outcomes but also on societal wellbeing and the use of public resources (see also Netra, Pihl-Thingvad, and Winter 2024).

To empirically test our theoretical framework, this study concentrates on a novel, employee-level indicator of organizational performance: staff satisfaction. We adopt this measure for four main reasons. First, as professional leaders expand their role in the organization and management of public services (Kirkpatrick, Altanlar, and Veronesi 2021; Noordegraaf 2011), it is important to understand the implications of this involvement for the organizational workforce. Second, staff satisfaction gaugs the impact of decisions that directly affect employees while also capturing broader managerial choices related to resource allocation, structure and process design, and goal setting (Cantarelli, Belardinelli, and Belle 2016). Third, growing attention to staff satisfaction – and to workforce recruitment, training, and retention more broadly – has emerged across public sectors internationally, particularly in light of persistent concerns regarding employee well-being (Hur and Abner 2023). Fourth, although the influence of senior leaders on staff satisfaction is acknowledged in the Human Resource Management (HRM) literature, empirical research on this relationship remains limited (Agnihotri and Bhattacharya 2022; Boada-Cuerva, Trullen, and Valverde 2019). Hence, scholars have called for further investigation in this area, particularly with respect to observable characteristics of senior leaders such as formal education and career development (Steffensen et al. 2019).

The study aims to answer two main research questions: 1) Do professional leaders positively affect staff satisfaction? and 2) What are the boundary conditions that can positively influence the relationship between professional leaders and staff satisfaction? To answer these questions, we focus

on professional leaders (doctors) sitting on the governing boards of English National Health Service (NHS) acute care hospitals. This case is theoretically interesting as the NHS has been at the forefront of structural reforms aiming to involve medical professionals into the management sphere, spearheaded by the adoption of the clinical directorate model and the presence of doctors on boards (including CEOs) from the beginning of the 1990s (Kirkpatrick, Altanlar, and Veronesi 2024; Veronesi, Kirkpatrick, and Vallascas 2013). As a result, the percentage of doctors in leadership teams (or the 'strategic core') has doubled during the 2010s decade (Kirkpatrick, Altanlar, and Veronesi 2021), but the formal training and education of professional leaders in managerial knowledge and skills remains patchy at best.

The rest of the paper is organized as follows. We first position our theoretical framework within human capital theory and the assumed impact of professional leaders as 'pure' specialists on staff satisfaction. Subsequently, we develop the theoretical rationale for the emergence of hybrid specialists and formally articulate hypotheses concerning the moderating effects of two boundary conditions: accumulated managerial experience and degree of connectedness. Next, we outline the research design, detailing the variables employed and the methodological approach adopted in the empirical analysis. We subsequently present the findings and discuss their implications for theory, research, and practice, before drawing the final conclusions and indicating directions for future inquiry.

Theoretical framework

Professional leadership and staff satisfaction

A deeper understanding of how professional leaders influence staff satisfaction is critical across the public sector, but it holds particular significance for organizations such as hospitals, universities, and schools (Domagała et al. 2018; West et al. 2022). In Mintzberg's (1979) view, due to their nature of being stable but complex environments, these 'professional bureaucracies . . . rely on the skills and knowledge of their operating professionals to function', p. 349. Structurally, professionals exercise substantial autonomy over their work and operate relatively independently from colleagues. Thus, in professional bureaucracies, the middle management line is relatively thin, 'with little need for direct supervision of the operators' (ibid, p. 355). Importantly, the demands for greater control and accountability of professionals introduced by New Public Management reforms have made modest changes in the managerial structure of these organizations, which remain top-heavy and feature only a limited middle management presence (Kirkpatrick, Altanlar, and Veronesi 2021). But what are the implications of this for staff satisfaction?

According to Becker (1964), one critical dimension of human capital refers to 'what you know'. Knowledge is shaped by varying degrees of specialization, with investments in education, training and experience reflected in distinct individual characteristics related to specialization and expertise (Custódio, Ferreira, and Matos 2013; Ferguson and Hasan 2013). The depth of knowledge, skills and abilities of any individual is influenced by decisions to specialize (or not) in their education and training during different stages of their career (Castanias and Helfat 2001; Chen et al. 2021; Lazear 2004). Specialists such as doctors possess formal education and training in domains closely aligned with the organization's core activities (Netra, Pihl-Thingvad, and Winter 2024). Consequently, the value of professional labour derives primarily from expertise that provides a knowledge base relevant to the focal field (Abbott 1988; Freidson 1994). Relevant professional bodies/associations establish training needs and licencing standards to ensure that specialized expertise is progressively accumulated, regularly updated and consistently applied (Netra, Sørensen, and Nejstgaard 2022).

One stream of research suggests that specialists leverage their deeper knowledge base more effectively, exhibit stronger role commitment, and are more understandable in their intents (Souitaris et al. 2023; Zuckerman et al. 2003). A narrower but deeper expertise enhances resource-acquisition, as specialists are 'more adept at acquiring, assimilating, and integrating diverse knowledge to devise effective strategic actions' (Li and Patel 2019, 332). They also tend to possess a more clearly defined professional identity (Becker 1964; Zuckerman et al. 2003). Within public management scholarship, specialists are perceived to be more likely to prioritize core service provision because their knowledge base is context-specific (Goodall and Bäker 2015) and shaped by mental models developed through specialized education (Netra, Pihl-Thingvad, and Winter 2024). As specialists, professional leaders can delegate tasks more effectively and optimize workforce skills and resources for field-specific activities (Sarto, Veronesi, and Kirkpatrick 2019). Furthermore, they share with frontline professionals a domain-specific language accumulated through experiential practice, which facilitates communication and coordination (Goodall and Bäker 2015).

Therefore, specialist professional leaders can influence staff satisfaction in different ways. First, they can benefit from possessing field-specific human capital which enhances their credibility and standing in the profession (Sarto, Veronesi, and Kirkpatrick 2019), facilitating clearer communication of decisions to frontline professionals and promoting engagement and implementation (Kirkpatrick, Altanlar, and Veronesi 2024). Second, their deeper understanding and appreciation of the working environment enables them to act more effectively upon

task-related factors such as work pressures (Jones and Fulop 2021). Third, due to their familiarity and in-depth knowledge of the context specificities, professional leaders can provide more targeted support and exhibit effective leadership behaviour (Goodall and Bäker 2015). Fourth, their ability to connect domain-specific expertise with organizational tasks and activities can strengthen alignment across the workforce (Battilana 2011).

Conversely, another stream of literature emphasizes the importance for leaders of being a 'jack of all trades' (Lazear 2004; Souitaris et al. 2023). A broad breadth of experience can increase individuals' information-processing ability (Dragoni et al. 2011) and expand their knowledge base (Karaevli and Hall 2006). Generalism can help leaders to develop diverse knowledge repertoires and skills applicable to different contexts (Custódio, Ferreira, and Matos 2013), become faster and more effective learners (Karaevli and Hall 2006), and possess greater cognitive flexibility and knowledge transfer capabilities (Falato, Li, and Milbourn 2015). Mackey, Molloy, and Morris (2014) argue that competent generalists have greater capacity to motivate employees and allocate organizational resources efficiently (Finkelstein, Hambrick, and Cannella 2009) by bridging across multiple domains of knowledge (Custódio, Ferreira, and Matos 2013; Ferreira and Sah 2012). Conversely, specialists might encounter challenges in communicating with individuals from different fields and translating their in-depth knowledge and expertise in broader organizational contexts (Ferreira and Sah 2012).

In this respect, the specialization of professional leaders can result in counter-productive outcomes when it facilitates the emergence of 'pro-professional cultures' (Mannion, Davies, and Marshall 2005). The absence of formal management training may lead professionals to disengage from or neglect leadership responsibilities. Negative attitudes towards leadership roles can stem from limited management knowledge and familiarity or a lack of identity and purpose within the leadership sphere (Ham, Clark, and Spurgeon 2011). Such dynamics can encourage professional leaders to over-identify with their clinical roles and be reluctant to engage beyond professional networks (Kirkpatrick, Altanlar, and Veronesi 2024). Consequently, organizational resources risk being channelled towards professional concerns rather than broader organizational priorities (Succi and Alexander 1999; Veronesi, Kirkpatrick, and Vallascas 2013). Lastly, even when engaged in leadership roles, professionals can struggle to assert their influence or make their voice heard within organizational decision-making processes (Kirkpatrick, Altanlar, and Veronesi 2024).

Thus, this raises concerns about whether professional leaders, when operating as 'pure' specialists, can effectively fulfil leadership responsibilities for the entire workforce. Their presence in governing boards might not, at

least directly, translate into positive outcomes for organizational employees. Formally, our first hypothesis states that:

> **Hypothesis 1:** A higher representation of professional leaders on the governing boards of public sector organizations will not have any significant direct effect on the overall staff satisfaction.

The emergence of hybrid specialist professional leaders

As previously mentioned, recent scholarship suggests that specialization and generalism should be looked at in parallel, as they can both have simultaneous effects on the human capital of individuals (Mueller et al. 2021; Souitaris et al. 2023). Highly specialized individuals possess skills that are relevant for a given domain of expertise, yet often lack the broader human capital and generic skills especially needed to manage large and complex organizations such as hospitals (Custódio, Ferreira, and Matos 2013). Conversely, individuals with high levels of career generalism are likely to be short of expertise and dedicated focus in specific domains (Souitaris et al. 2023; Zuckerman et al. 2003). Hence, to fully understand the impact of professional leaders on staff satisfaction, we move beyond the specialist-generalist dichotomy and conceptualize managerial resources that professionals may possess as a composite bundle.

Mueller et al. (2021) postulate the existence of a trade-off between specialization and generalism, suggesting that individuals who achieve a balance along this continuum become more valuable for their organizations. Similarly, Souitaris et al. (2023) highlight how narrow (but specialized) expertise can be offset by a broad range of (managerial) experiences. Consequently, it is theoretically possible to compensate depth of expertise with breadth of experience. From the perspective of professional leadership, offsetting in-depth specialization with generalist experience leads to the creation of a new typology of professional leader with a broader set of managerial resources: the hybrid specialist. To achieve this, however, we hypothesize the presence of two boundary conditions that will enable professional leaders to unlock the potential of in-depth, domain-related expertise: the acquisition of broad, more generic managerial knowledge, skills and abilities, and the degree of collaboration and trust ('connectedness') within the team context – here hospital governing boards – where leadership functions are enacted.

First, human capital theory posits that managerial resources comprise 'innate and learned expertise, abilities and knowledge' relevant for organizations (Castanias and Helfat 2001, 662). Drawing from the resource-based view of the firm (Barney 1991), Castanias and Helfat's (1991; 2001)

managerial rents model argues that heterogeneity in managerial resources across individuals reflects differences in skill types and levels of knowledge and ability. Thus, managerial resources are considered valuable, rare and difficult to acquire (Mackey, Molloy, and Morris 2014; Sundaramurthy, Pukthuanthong, and Kor 2014). They can be attained through formal education, but may also be developed through prior work experience, as effective management is closely tied to learning-by-doing and the practical exercise of managerial responsibilities (Castanias and Helfat 2001; Datta and Iskandar-Datta 2014). Hence, prior managerial experience significantly shapes prior knowledge, confidence and cognitive capacity of individuals (Kor 2003), influencing their strategic choices, biases, and accomplishments (Finkelstein, Hambrick, and Cannella 2009). Accordingly, the accumulation of managerial experience is routinely equated to greater management competence (Castanias and Helfat 2001; Kirkpatrick, Zardini, and Veronesi 2023; Kor 2003; Mueller et al. 2021).

However, the acquisition of broad managerial resources remains only partially embedded in the formal education and training of professionals (Noordegraaf et al. 2016). In some ways, this is due to established socialization patterns and the complexity of changing institutionalized professional training and development criteria by adding new skills and competencies (Noordegraaf 2011). These limitations underscore the importance of prior, direct experience in the discrete sphere of management and substantial on-the-job learning (Buchanan et al. 2013). Professionals exposed to management responsibilities early on in their careers and familiar with managerial demands tend to exhibit a more positive orientation and stronger motivation towards leadership roles (McGivern et al. 2015). Consequently, the acquisition of management competency (through managerial experience) emerges as a critical determinant of the effectiveness of professional leaders (Kirkpatrick, Zardini, and Veronesi 2023).

Building on human capital theory, we therefore hypothesize that the accumulation of managerial experience among professional leaders enables hybrid specialists to exert a positive influence on employee satisfaction. Formally, we expect that:

> **Hypothesis 2:** Greater managerial experience of professional leaders on the governing boards of public sector organizations will positively moderate the relationship between professional leadership and staff satisfaction.

Second, according to the social capital perspective (Adler and Kwon 2002), the internal connections among board members represent a key asset in terms of the information and resources embedded within these ties (Barroso-Castro, Villegas-Periñan, and Casillas-Bueno 2016; Kim and Cannella 2008). Given that boards functions as a human group,

interpersonal ties between directors directly influence the board's decision-making and its capacity for information processing (Kirkpatrick, Vallascas, and Veronesi 2017; Tian, Haleblian, and Rajagopalan 2011). Specifically, the ability of directors to collectively process information depends on the 'degree of connectedness' in the boardroom (Barroso-Castro, Villegas-Periñan, and Casillas-Bueno 2016). Acting as a 'bonding' form of social capital, connectedness facilitates trust and collaboration between directors, strengthens teamwork and enhances overall cohesiveness (Kim and Cannella 2008). Well-developed interpersonal ties enable boards to operate cohesively (Barroso-Castro, Villegas-Periñan, and Casillas-Bueno 2016), reducing transaction and coordination costs and increasing the board potential to work effectively as a group (Kim and Cannella 2008). Moreover, connectedness can break down barriers that undermine group functioning and encourage directors to share critical information with trusted peers (Kim and Cannella 2008; Offstein, Gnyawali, and Cobb 2005).

A higher degree of connectedness is particularly important for governing boards within professional bureaucracies (Mintzberg 1979), which are composed of directors with substantially different educational and professional backgrounds. Effective teamwork requires directors to develop cohesiveness through familiarity with each other's habits, personalities and skills (Sundaramurthy and Lewis 2003) and 'to communicate, assimilate their cognitive frameworks, and develop shared understandings' (Barroso-Castro, Villegas-Periñan, and Casillas-Bueno 2016, 11). Nevertheless, specialist professional leaders frequently operate on the basis of cognitive schema, beliefs and preferences that diverge from those of their generalist counterparts (Kim and Cannella 2008). Previous studies of NHS boards have documented tensions at the interface between professional leaders and career managers, with boards prone to behave as a separate set of individuals rather than cohesive units (Veronesi and Keasey 2011). Conversely, other research shows the potential for productive collaboration, allowing professional leaders to cooperate effectively with generalists (Jones and Fulop 2021). Stability and longevity in board composition also play a pivotal role in fostering effectiveness, providing a foundation for overcoming 'occasionally fractious' relationship among directors (Chambers and Exworthy 2020, 16).

Consequently, enabling professional leaders to fully leverage their in-depth, field-related expertise and function as hybrid specialists requires that all board members accumulate shared experience of working together. Hence, as our third and final hypothesis, we predict that:

> **Hypothesis 3:** A higher degree of connectedness in the governing boards of public sector organizations will positively moderate the relationship between professional leadership and staff satisfaction.

Research design

To investigate the three outlined hypotheses, the study concentrates on governing boards in the English NHS acute care hospital sector. Theoretically, this case is particularly relevant as the NHS was one of the early adopters of managerial and then leadership roles for professionals in the 1980s (Kirkpatrick, Altanlar, and Veronesi 2021). This drive towards increasing the presence of doctors in leadership positions has subsequently been further pushed by policy-makers, think-tanks and professional associations (Ham, Clark, and Spurgeon 2011). The NHS presents the advantage of having collected publicly available data on staff satisfaction since the introduction of the initial survey in 2003 in collaboration with the Picker Institute, which directly runs it since 2011. The analysis was based on 8 years (2009/10–2016/17) of a composite database. In total, we used a panel of 148 NHS hospital trusts (covering the almost totality of the population) corresponding to 1081 observations, which allowed us to run time series cross-sectional analysis with both large *N* and *T*.

Most of the organization-level information can be accessed via the NHS official repository of data: NHS Digital. This includes the Hospital Estates and Facilities Statistics (offering information on location, type, and legal status of each hospital trust) and the Hospital Episode Statistics database (for organizational activity such as number of admissions). From the archive of the NHS executive body – NHS England – we accessed the NHS Reference Costs Data Set (for tariffs and costs related to treatments related to NHS-funded services) and the NHS Bed Availability and Occupancy Data (providing information on bed numbers and their overall usage). Additionally, the Database of NHS Management was employed to gather information on governance data including the presence of professionals in leadership roles. Supplied by Wilmington Healthcare Ltd, this commercial database has been put together and published since 1991, with a new edition coming out every 4 months. The latest version used in this study is from May 2016 and included information on around 30,000 managers and more than 100 management roles. A managerial role is associated with budgetary, financial and human resources responsibilities. Doctors are identified via their salutation and/or the presence of a General Medical Council registration number (Kirkpatrick, Altanlar, and Veronesi 2021).

Measures

As mentioned, the information on workforce satisfaction (our dependent variable 'Staff Satisfaction') was retrieved from the NHS Staff Survey (www.nhsstaffsurveys.com.) which is one of the largest workforce surveys worldwide (> 1 million eligible workers in 2016/17). The questionnaire, which has

been robustly validated and periodically used in research (see for a fuller description Elkomy, Murad, and Veleanu 2023; also West et al. 2022), is a census survey sent out to all NHS staff on September 1st each year and provides a national picture to inform understanding of staff experience of their working lives. All NHS organizations are required to participate but involvement at the employee level is entirely voluntary. The questionnaire covers a wide range of topics which are then incorporated into an overall score, calculated on a scale from 1 to 5. Particular weight in the calculation of the summary score is given to staff willingness to recommend the organization as a workplace or for treatment, their motivation and their ability to contribute to improvements. In 2016/17, 504,982 people took part in the acute care hospital sector with an overall response rate of 44%. The staff satisfaction score was rebased to hundreds to enhance the clarity and readability of the estimation outputs.

The main independent variable ('Board PLs') represents the percentage of individuals with a medical background in relation to all members of the governing board of hospital trusts. Every board of directors needs to have the statutory presence of at least one Medical Director. Doctors also take on other executive director roles (including CEOs), with a few becoming non-executive directors. Appointment to a board follows an internal application process for executive roles, while non-executive directors are selected on the basis of an external recruitment process (Kirkpatrick, Zardini, and Veronesi 2023). The information on board composition was derived from the Database of NHS Management, which was also used to calculate one of the two moderators: the managerial experience of board professional leaders ('Experience PLs'). This was computed as the total number of years a professional leader held in management roles throughout their career excluding breaks such as research sabbaticals, maternity leaves, and so forth. All leadership roles were taken by doctors at the apex of their professional career (i.e. when they are already hospital consultants) (Kirkpatrick, Zardini, and Veronesi 2023). The same database was additionally used to determine the second moderator: the degree of connectedness in the boardroom as proxied by the length of joint tenure of all board directors ('Joint Tenure)'. We followed the approach of Carroll and Harrison (1998) to generate a measure of 'common historical experience' or TLAP, a proxy of social interaction over time. This entails the average of the pair-wise overlap in tenure for all possible pairs on the board: $TLAP = 1/N \sum_{i \neq j} \min(u_i, u_j)$ where N is the total number of pair-wise comparisons.

With reference to the control variables included in the baseline model, 'Board Size' represented the total number of board members. Larger boards are, on balance, less effective decision makers. The natural log of the total number of available beds in a hospital trust was used as a proxy for organizational size ('Size'). Larger hospitals are more complex organizations to run

and potentially have lower staff satisfaction. Similar reasoning was applied for the controls capturing organizational complexity: the number of units from which a hospital trust delivered care ('Number of Units'); the case-mix of patients treated for each hospital trust ('Case-mix Index'); the overall capacity of a hospital trust proxied by the percentage of bed occupancy ('Bed Occupancy'); the percentage of services provided via external contractors, mainly related to estates management and cleaning ('Contracted Out'); and, as a proxy for the overall demand for a hospital trust services, the number of patient admissions ('Admissions'). Finally, we added three control variables that captured the differences in status of hospital trusts. First, Foundation Trust (FT) status corresponds to a greater autonomy in the design of healthcare provision and the use of resources ('Foundation Trust'). Other two variables gauged whether a hospital trust was also engaged in teaching and research ('Teaching Status') or if it was focused on specialist services only ('Specialist Status'), such as paediatrics, orthopaedics, and so on.

Empirical approach

Given the longitudinal nature of the composite database, we employed time series cross-sectional analysis with trust-year cases. The main analysis was run with a Panel Corrected Standard Errors (PCSEs) estimation approach (Beck and Katz 1996). This statistical technique is robust to the likelihood of contemporaneous correlation of errors across observations and unit heteroskedasticity. PCSEs estimations were employed with lagged dependent variables to account for possible serial correlation of the error terms (i.e. dependence across different time periods) (Hicks 1994). We also used the Prais – Winsten Generalised Least Square (GLS) method, which enables the incorporation of time-invariant variables and where the errors are assumed to follow a first-order autoregressive process, specific to each hospital trust (Beck and Katz 1996).

For robustness purposes, we employed three additional analytical techniques. The first was the Driscoll and Kraay (1998) estimation approach. This nonparametric covariance matrix estimator generates heteroscedasticity consistent standard errors that are robust to forms of spatial (between the groups) and temporal (autocorrelated up to some lag) dependence. Specifically, with this estimator the robust standard errors can be generated by two steps fixed effects (within) regressions. As such, the Driscoll-Kraay estimator allows to control for unobserved heterogeneity (i.e. for potential explanatory factors of staff satisfaction not included in the model). The second technique was the Hausman and Taylor (1981) estimation approach. It essentially entails a hybrid model that ensures the consistency of a fixed effects model with the efficiency and applicability of a random

effects model. This two-stage estimator consists of an instrumental variables regression on data that are weighted similarly to data for random-effects estimation. It ensures the possibility to control for endogeneity as the individual-specific unobservable effects are treated as potentially correlated with some other explanatory variables. The third technique, the two-stage least squares instrumental variable (2SLS-IV) estimation, further controls for potential endogenous effects between the dependent variable and the main explanatory variable and corrects the issue of correlation of the latter with the error term. The chosen instrument needs to be highly related to the endogenous independent variable and unrelated to the dependent variable, as well as being determined outside the model and uncorrelated with the error term. Here, the IV was calculated as the number of professional leaders at the strategic apex level (i.e. beyond the board), deflated by the number of full-time-equivalent (FTE) staff in a hospital trust.

Results

In Table 1, we report the descriptive statistics related to the sample population employed in the study. The mean staff satisfaction score was relatively consistent across the years in the panel, showing persistency in the performance of individual hospital trusts. Essentially, those organizations with

Table 1. Descriptive statistics ($N = 1081$).

Variable	Definition	Mean	Median	Min	Max	St. Dev.
Staff Satisfaction	Staff Satisfaction in 00s	366.13	369.00	298.55	409.00	19.00
Board PLs	Percentage of professional (physician) leaders at the board level	14.27	11.11	5.56	50.00	7.62
Experience PLs	Average managerial experience of board professional (physician) leaders	7.90	8.00	0.00	21.00	4.00
Joint Tenure	Joint tenure of board members	1.45	1.36	0.00	5.65	0.79
Board Size	Number of board members	11.67	11.00	6.00	23.00	2.49
Size	Natural log of total number of beds	6.34	6.45	1.95	7.69	0.71
Number of Units	Number of units of a hospital trust	4.18	4.00	2.00	18.00	2.50
Case-mix Index	Case-mix for each hospital trust divided by mean case-mix	1.00	0.25	0.04	10.83	1.49
Bed Occupancy	Percentage of bed occupancy of a hospital trust	86.37	87.00	42.30	100.00	6.99
Outsourcing	Percentage of services contracted out	35.25	27.00	0.00	100.00	27.95
Admissions	Natural log of admissions deflated by case-mix	56.47	46.26	0.88	311.68	55.26
Foundation Trust	Number of years a trust has been an FT	3.00	2.00	0.00	11.00	3.32
Teaching Trust	Dummy variable for teaching trust status	0.17	0.00	0.00	1.00	0.38
Specialist Trust	Dummy variable for specialist trust status	0.13	0.00	0.00	1.00	0.33

higher levels of satisfaction in their workforce maintained this performance over the period investigated. The coefficient of variation also revealed relative homogeneity in satisfaction levels across organizations, but still sufficient to provide statistically meaningful estimations. Directors with a professional background represented on average 14% of the whole board (for a mean board size between 11 and 12 directors), a relatively low value in line with previous research focused on the NHS (e.g. Veronesi, Kirkpatrick, and Vallascas 2013). Professional leaders had a mean managerial experience of nearly 8 years which suggests that senior management roles were normally taken later on in their career progression. Interestingly, the average joint tenure on the board was rather short, corresponding to roughly 1.5 years or half of a normal board mandate (3 years). This is a consequence of the rather accentuated level of turnaround in NHS boards, with the average tenure of an NHS CEO between 3 and 4 years. The average size of a hospital trust was 600 beds, with a total workforce of circa 4250 FTE employees, operating from 4 units and a bed occupancy nearing 87%. The coefficient of dispersion for ratio variables did not cause any concern (Certo et al. 2020). Similarly, we did not observe any specific issue of multicollinearity between the variables employed as all their values fell within acceptable limits (see Table 2 reporting the Pearson bivariate correlation matrix). Additionally, we calculated the variance inflation factors in each of the estimations run and all values were well within the standard thresholds (< 5).

Table 3 reports the results of the analysis related to all three hypotheses. Starting from H1, which posed doubts on the direct positive effect of professional leadership on overall workforce satisfaction, the PCSEs estimations did not reveal any statistically significant impact, neither in positive nor in negative terms, of a greater percentage of professional leaders in the boardroom on the staff satisfaction score (see column 1). Thus, our findings did not show any positive direct effect of having a greater representation of individuals from the medical profession on governing boards for the organizational workforce.

While this initial result offers some tentative evidence against the grain of the debate on professional leadership, it is in line with the theoretical assumptions from human capital theory on the potential limitations of in-depth domain expertise in the absence of other generalist managerial resources. Thus, before drawing definitive lessons, these findings need to be integrated with the analysis of the interaction effects (formalized in H2 and H3) between the two moderating variables – level of managerial experience of professional leaders and degree of board connectedness – with the ratio of professional leaders to the whole board.

First, we note that of the two moderators, one (managerial experience) appeared to have in the main a significant and positive effect on staff satisfaction, while the other one (joint tenure on the board) did not have

Table 2. Bivariate pearson correlation matrix ($N = 1081$).

Variable	1	2	3	4	5	6	7	8	9	10	11	12	13
1- Staff Satisfaction													
2- Board PLs	0.08*												
3- Experience PLs	0.17*	−0.10*											
4- Joint Tenure	0.03	−0.07*	0.17*										
5- Board Size	0.20*	0.18*	0.06	−0.12*									
6- Size	−0.27*	0.01	−0.02	−0.00	0.31*								
7- Number of Units	0.05	0.17*	0.01	−0.01	0.36*	0.42*							
8- Case-mix Index	0.24*	0.12*	0.03	−0.04	−0.01	−0.23*	−0.05						
9- Bed Occupancy	0.02	−0.04	0.07*	−0.07*	0.10*	0.26*	0.00	−0.07*					
10- Outsourcing	0.03	0.07*	−0.00	−0.08*	0.04	0.15*	0.13*	−0.02	0.14*				
11- Admissions	−0.09*	−0.07*	−0.04	0.03	0.10*	0.23*	0.04	−0.62*	0.14*	0.05			
12-Foundation Trust	0.43*	−0.02	0.17*	0.11*	0.13*	−0.11*	0.04	0.02	−0.11*	−0.13*	0.01		
13- Teaching Trust	0.05	0.20*	0.02	0.02	0.15*	0.39*	0.38*	0.00	0.02	0.17*	−0.07*	0.04	
14- Specialist Trust	0.29*	0.08*	0.03	0.05	0.06*	−0.74*	−0.24*	0.35*	−0.36*	−0.10*	−0.31*	0.09*	−0.17*
Variance Inflation Factor (VIF)		1.13	1.09	1.09	1.30	3.07	1.43	1.75	1.21	1.08	1.73	1.12	1.40

Notes: Significance at *$p < 0.05$.

Table 3. Coefficients for panel corrected standard errors (PCSEs) estimations: staff satisfaction is the dependent variable.

Variable	(1)	(2)	(3)
Board PLs	0.024 [0.409]	−0.111 [0.150]	−0.082 [0.203]
Experience PLs	0.153** [0.043]	−0.074 [0.572]	0.149** [0.048]
Joint Tenure	0.327 [0.270]	0.258 [0.388]	−0.881 [0.140]
Board PLs × Experience PLs		0.019** [0.050]	
Board PLs × Joint Tenure			0.086** [0.022]
Board Size	0.382***[0.001]	0.385***[0.001]	0.390***[0.000]
Size	−2.120***[0.003]	−2.076***[0.004]	−2.155***[0.003]
Number of Units	0.126 [0.177]	0.104 [0.281]	0.122 [0.196]
Case-mix Index	0.603* [0.066]	0.592* [0.067]	0.621* [0.059]
Bed Occupancy	0.106** [0.021]	0.109** [0.017]	0.107** [0.020]
Outsourcing	−0.006 [0.501]	−0.006 [0.541]	−0.005 [0.610]
Admissions	0.014* [0.098]	0.013 [0.118]	0.014* [0.096]
Foundation Trust	0.747***[0.000]	0.741***[0.000]	0.746***[0.000]
Teaching Trust	3.026***[0.000]	3.184***[0.000]	3.032***[0.000]
Specialist Trust	3.218* [0.062]	3.315** [0.050]	3.188* [0.069]
Past Staff Satisfaction	YES	YES	YES
SHA Dummies	YES	YES	YES
Observations	1081	1081	1081
Number of groups	148	148	148
Wald (chi^2)	664***	306***	826***

Notes: All estimations include a constant, past performance controls, and Strategic Health Authority (SHA) dummies, which are not reported due to space reasons. Errors are assumed to be panel-level heteroskedastic and correlated across panels. First order autocorrelation is assumed within panels. Significance at *$p < 0.10$, **$p < 0.05$, ***$p < 0.01$.

any statistically significant direct impact on the dependent variable. However, as shown in Table 3 columns 2–3, the key findings are related to the two interaction terms: in both cases, the analysis shows that overall staff satisfaction was greater when a higher percentage of professional leaders in the boardroom was associated with either a greater managerial experience of these professional leaders or a longer overlapping tenure (the proxy for connectedness) between board directors. Either way, confirming H2 and H3, professional leadership did appear to have a positive, moderated effect on the overall satisfaction of the organizational workforce.

To confirm the robustness of these findings, post-estimation analysis after interaction tests was conducted by looking at the marginal effects of different percentages of professional leadership at the board level (see Figures 1 and 2 for a graphical visualization). This suggests that the impact of professional leadership on staff satisfaction becomes statistically significant and positive after around the 70th percentile of managerial experience (circa 10 years), and after around the 60th percentile of board joint tenure (roughly 1.6 years). In economic terms, at higher levels of managerial experience or joint tenure on the board, increasing the percentage of professional leaders by 10 (e.g. the Board PLs value moves from 10% to 20%, roughly one more medical professional on the board) leads to a 5-percentile increase (from the median value) in staff

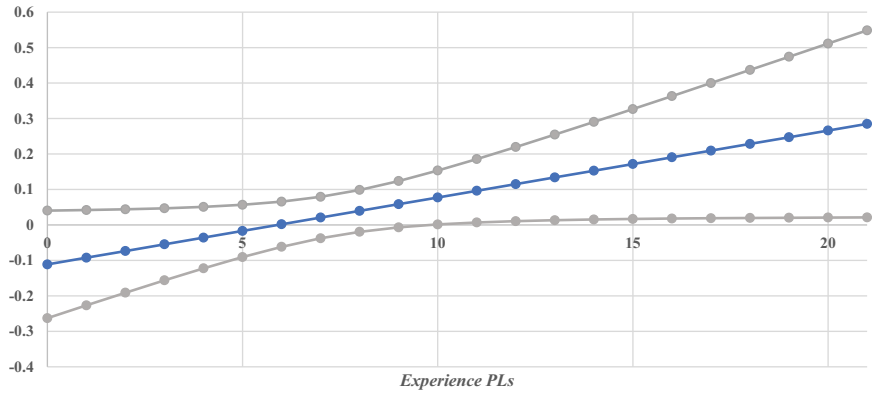

Figure 1. Marginal effects of PLs with Managerial Experience as moderator.

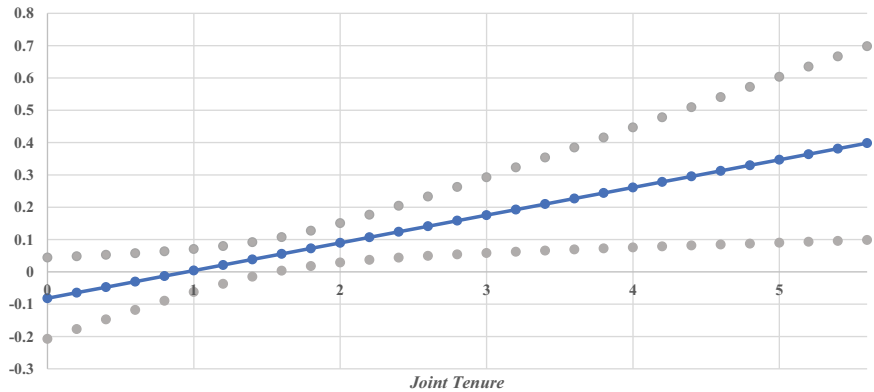

Figure 2. Marginal effects of PLs with Joint Tenure as moderator.

satisfaction. Additionally, we did not find any evidence of a curvilinear effect of the two interaction terms on the dependent variable.

With reference to the other variables included in the model, larger boards seemed to be associated with greater staff satisfaction (with a 1-percentile increase from the median value ceteris paribus – c.p.), perhaps because this would enable for greater representativeness of staff needs and priorities in boardroom discussions. Consistent with previous research, we also found that bigger organizations were likely to have a less satisfied workforce (2-percentile decrease c.p.), likely due to problems of communication, coordination and effective allocation of resources. Unsurprisingly, the findings also revealed that more autonomous hospital trusts (FTs)(1-percentile increase c.p.), those with greater focus on education and research, and the specialist ones had higher levels of staff satisfaction (both 7-percentile increase c.p.). As shown in Tables 3, we also included in the model the

past values of staff satisfaction and the location dummies of hospital trusts without affecting the main results. Taken together, therefore, the findings are supportive of the idea that professional leadership bears a positive impact on staff satisfaction, but this notion receives a qualified support.

To further verify the robustness of the main analysis, we ran the Driscoll and Kraay (1998), Hausman and Taylor (1981) and 2SLS-IV estimation approaches. As reported in Table 4, we found full support for all main results previously described. Interestingly, these further estimations provided some evidence of a negative impact of the board joint tenure moderator on staff satisfaction, but the two interaction terms were again significantly and positively related to the dependent variable. Moreover, we also found that the two moderators, managerial experience of PLs and length of joint tenure on the board, had statistically significant and positive impact on questions in the NHS staff survey focused on communication between senior management and staff (question KF6) and staff motivation (question KF4) (analysis not tabulated).

Additionally, to moderate concerns over the main results being skewed by one professional leader with high levels of managerial experience, we carried out the analysis only for boards with one professional leader as director (representing the majority of the sample), with comparatively similar results obtained (see Table 4). We also controlled for the gender of board directors, which did not appear to have any significant effect. Moreover, we ran a further test aiming to investigate the impact of an exogenous shock on the relationship between professional leadership and staff satisfaction. Specifically, we looked the introduction of the Health and Social Care Act of 2012, which spearheaded a wholesale reorganization of primary care services and increased the availability of experienced career managers in the NHS. As reported in Table 4, we did not find any significant change in the main findings previously reported.

Discussion

The point of departure of this paper centred on debates around the increasing involvement of professionals such as doctors in the leadership of public sector organizations. Focusing on acute care hospital trusts in the English NHS, we investigated the effect of professional leadership on hospital governing boards on staff satisfaction. Consistent with the predictions of H1, the analysis did not reveal, prima facie, any significant direct effect of a greater professional representation in the boardroom on overall workforce satisfaction. This finding is not completely surprising when considering the existing literature (see Clay-Williams et al. 2017; Netra, Sørensen, and Nejstgaard 2022). First, it follows the assumption in human capital theory that individuals with highly developed but narrow expertise in a certain field are

Table 4. Coefficients for Driscoll-Kraay, Hausmann-Taylor, 2SLS-IV estimations and supplementary robustness tests: staff satisfaction is the dependent variable.

Variable	Driscoll-Kraay (fixed effects)		Hausmann-Taylor		2SLS-IV		PCSEs: 1 PL on the board		PCSEs: HSCA 2012	
Board PLs	−0.748***	−0.199	−0.724***	−0.194	−0.021	−0.021	−2.106***	−2.091	−0.136*	−0.097*
	[0.000]	[0.171]	[0.000]	[0.148]	[0.794]	[0.794]	[0.005]	[0.003]	[0.066]	[0.097]
Experience PLs	−0.220	0.877***	−0.096	0.932***	−0.010	0.201***	0.978***	0.218**	−0.160	0.058 [0.373]
	[0.172]	[0.000]	[0.740]	[0.000]	[0.655]	[0.000]	[0.000]	[0.011]	[0.179]	
Joint Tenure	−3.464***	−4.670***	−3.281***	−4.573***	−1.126	−0.632	−0.060	−5.389	0.939***	−0.096
	[0.001]	[0.004]	[0.000]	[0.001]	[0.256]	[0.199]	[0.817]	[0.000]	[0.001]	[0.863]
Board PLs × Experience PLs	0.093***		0.084***		0.015*		0.123***		0.018**	
	[0.000]		[0.000]		[0.009]		[0.025]		[0.035]	
Board PLs × Joint Tenure		0.104**		0.130* [0.087]		0.053**		0.536***		0.078**
		[0.020]				[0.033]		[0.002]		[0.026]
Controls	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES
SHA Dummies	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES
Observations	1081	1081	1081	1081	1081	1081	650	650	1081	1081
Number of groups	148	148	148	148	148	148	129	129	148	148
F/Wald (chi2)	3138***	677***	551***	526***	240***	241***	8720***	645***	237***	7325***

Notes: All estimations include a constant, controls as in Table 3 and Strategic Health Authority (SHA) dummies, which are not reported due to space reasons. In the Driscoll-Kraay estimations, errors are assumed to be heteroskedastic, autocorrelated and correlated between panels. In 2SLS-IV estimations, errors are robust to heteroskedasticity and autocorrelation. F-statistics are provided for Driscoll-Kraay and 2SLS-IV estimations and Wald (chi^2) statistics are provided for Hausmann-Taylor estimations. The coefficient of the IV is statistically significant at the 1% level in the first stage. The Kleibergen-Paap Lagrange Multiplier test rejects under-identification and the Cragg – Donald – Wald F-test rejects weak-identification. The Hansen's J-test confirms that the instruments are uncorrelated with the error term. Significance at $^{*}p < 0.10$, $^{**}p < 0.05$, $^{***}p < 0.01$.

unlikely to have a positive impact beyond core service provision (Castanias and Helfat 2001; Datta and Iskandar-Datta 2014; Netra, Pihl-Thingvad, and Winter 2024). Second, the evidence base remains 'contradictory' (Netra, Sørensen, and Nejstgaard 2022), and no prior study has investigated the impact of professional leadership on staff satisfaction (Kaiser, Schmid, and Schlüchtermann 2020). Third, our study has used a longitudinal database and a more advanced methodological approach accounting for unobserved heterogeneity and potential endogeneity.

However, a more nuanced picture is offered by the analysis linked to H2 and H3. Here, we find evidence supporting the involvement of professionals in leadership roles for staff satisfaction, albeit under specific circumstances. The results highlight the presence of two critical boundary conditions: 1) the acquired generalist human capital of professional leaders in the form of their accumulated managerial experience; and 2) the level of integration within governing boards, operationalized as the degree of connectedness between directors. Thus, the positive influence of professional leadership on staff satisfaction cannot be attributed solely to, as previously suggested, the deep sector expertise of professional leaders (Kirkpatrick, Zardini, and Veronesi 2023; Netra, Pihl-Thingvad, and Winter 2024; Veronesi, Kirkpatrick, and Vallascas 2013) or their early socialization and credibility among peers (Goodall 2011; Ham, Clark, and Spurgeon 2011). When either moderating factor is present, professional leaders turn into what we term hybrid specialists: individuals capable of leveraging both depth of expertise and breadth of experience to generate outcomes extending beyond core service provision.

These findings carry significant implications for the literature on professional leadership. They suggest that professional leaders can transcend the limitations of specialized yet narrow cognitive frames that traditionally constrain their influence to field-specific decision making (Mueller et al. 2021; Netra, Sørensen, and Nejstgaard 2022). Rather than exerting impact 'in the absence of management' (Waring 2014), they do so through management, by applying experience gained in managerial roles (Mackey, Molloy, and Morris 2014) and/or by 'being connected' (Barroso-Castro, Villegas-Periñan, and Casillas-Bueno 2016) with non-professionals (generalists) board members. Consistent with Mintzberg's (2017) proposition, we find that the development of managerial competence by professional leaders is strongly contingent to experiential learning. Direct personal experience in management provides professionals with first-hand exposure to the skills and knowledge required for effective leadership (Jones and Fulop 2021). The benefits of greater connectedness at the board level also resonate with previous studies on professional representation in NHS boards, which suggest that greater familiarity between board members can mitigate excessive prioritization of business-type goals and financial imperatives in governing boards at the expense of professional expertise (Veronesi and Keasey 2011).

Additionally, connectedness can mitigate the dominance of 'professional cultures', where the power of professionals can divert 'attention towards meeting their own needs and priorities' (Mannion, Davies, and Marshall 2005, 436).

Furthermore, the evidence concerning the two boundary conditions of professional leadership highlights key lessons for human capital theory (Becker 1964). Existing public sector research has largely concentrated, with mixed results, on the dichotomy between specialists and generalists to explain potential differences in the formal educational background and training of public sector managers (see Netra et al. 2022). Only Sarto, Veronesi, and Kirkpatrick (2019) have attempted to go beyond this dichotomy, but their findings remain in the main inconclusive. In line with Mueller et al. (2021), our analysis reveals the existence of a continuum between specialization and generalism (see also Souitaris et al. 2023). We theorize and empirically test a framework that integrates the specialization perspective, which emphasizes narrow, domain-specific human capital, and the generalism view, which gives prominence to a broad, general career background (Chen et al. 2021; Datta and Iskandar-Datta 2014). In doing so, we reinforce the argument that 'the notions of generalism and specialization should be considered together' (Mueller et al. 2021, 1999), and suggest that greater value may be generated by individuals who achieve a degree of integration between specialization and generalism (Souitaris et al. 2023).

Crucially, our study shows that high levels of specialization can yield significant value when complemented by career generalism – that is, when depth of expertise is combined with breadth of experience. The emergence of a new typology of professional leader – the hybrid specialist – points to the importance of the trade-off between expertise and experience to realize the full potential of professional involvement in leadership roles. Managerial competence represents a key 'resource for directors to rely on in the presence of high information processing demand' (Khanna, Jones, and Boivie 2014, 572), and plays a pivotal role in shaping overall board effectiveness (Sundaramurthy, Pukthuanthong, and Kor 2014). Exposure to a variety of managerial challenges and tasks enables professional leaders to acquire learned knowledge and skills outside their professional background (Kirkpatrick, Zardini, and Veronesi 2023), facilitating their evolution into hybrid specialists. Accordingly, while reaffirming the importance of in-depth domain expertise, we additionally highlight the strategic value of broad, generic managerial knowledge and skills – scarce yet essential human capital resources (Mackey, Molloy, and Morris 2014).

Moreover, we extend the predictions of human capital theory on professional leadership by integrating insights from the social capital perspective (Adler and Kwon 2002). While the individual knowledge, skills and abilities of professional leaders remain critical for organizational-level outcomes,

equally consequential are the relational dimensions of collective leadership arrangements such as boards. In this respect, our findings show that interpersonal ties serve a specific bonding function, allowing professional leaders to leverage their in-depth expertise of the field (Barroso-Castro, Villegas-Periñan, and Casillas-Bueno 2016). Given that each board is bound to work in a distinct manner, positive dynamics are generated from directors' sustained interaction (Kor 2003). Such connectedness foster the development of shared norms and values, enhancing collaborative behaviours, mutual expectations and commitment to collective action (Offstein, Gnyawali, and Cobb 2005), while mitigating tendencies to 'unitary . . . command and control' by generalist managers (Veronesi and Keasey 2011). These dynamics empower professional leaders to engage in more open discussions, have greater scope to translate complex clinical matters for the other board members and communicate board decisions more effectively to the organizational workforce (Jones and Fulop 2021).

Conclusions

This study contributes to the expanding body of literature looking at the involvement of professionals in the leadership of public sector organizations. Going beyond traditional indicators of organizational performance such as financial and quality outcomes (Goodall 2011; Jiang et al. 2009; Kaiser, Schmid, and Schlüchtermann 2020; Veronesi, Kirkpatrick, and Altanlar 2015; Veronesi, Kirkpatrick, and Vallascas 2013), our findings provide novel evidence that professional leadership constitutes a significant determinant of staff satisfaction. Moving into previously uncharted territory, we show the critical influence of two boundary conditions on this relationship: the experience accumulated by professional leaders in management roles, and the degree of connectedness established within governing boards. These conditions, we argue, underpin the emergence of a new typology of professional leader – the hybrid specialist – characterized by the blending of depth of expertise with breadth of experience (Mueller et al. 2021; Souitaris et al. 2023).

For all purposes, the trajectory of reforms across public services, and healthcare systems in particular, signals a growing presence of professionals with experience in leadership and management roles (Kirkpatrick, Altanlar, and Veronesi 2021). Although changes in the education and training of professionals are still in the process of consolidation, the acquisition of managerial knowledge and skills, alongside the capacity to work in leadership teams comprising non-specialists, will progressively become 'naturally embedded' within the concept of professionalism (Jones and Fulop 2021). Consistent to Battilana (2011), our findings show that professional leaders possess the ability to make decisions beneficial for the

whole of the workforce rather than privileging specific professional groups. It is, consequently, imperative that these leaders develop competences beyond their core professional domain and establish interpersonal relationships that enable them to extend and leverage their depth of expertise.

Lastly, we acknowledge some limitations of this study and outline future directions for research. First, adopting different methodological approach based on case studies and interviews could provide richer insights into the mechanisms and processes through which professional leaders influence staff satisfaction. Second, it would be interesting to replicate this study in other public sector domains, such as education, where professionals have taken on leadership roles and the blending of professional and managerial logics might be more advanced. Third, comparative analyses across healthcare systems in different countries could reveal contextual factors capable of moderating the relationship between professional leadership and staff satisfaction. Fourth, it will be important to understand whether changes in the educational curriculum of professionals strengthen leadership effectiveness, potentially substituting or complementing the need for experiential managerial learning. Furthermore, doctors are by no means the only professionals with management and leadership roles in the healthcare context. It would therefore be valuable to investigate how nurses and other clinical professionals contribute to staff satisfaction when assuming leadership responsibilities. Finally, exploring whether the positive effects of professional leadership persist in poorly performing hospital trusts would offer important insights into its robustness under adverse organizational conditions. Collectively, all these additional lines of inquiry could deepen our understanding of the potential benefits and contingencies associated with professional leadership.

Disclosure statement

No potential conflict of interest was reported by the author(s).

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