All Bark and No Bite? Toward an Understanding of Chief Digital Officers' Power in Organizations

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Abstract

Organizations are increasingly installing Chief Digital Officers (CDOs) to cope with the challenges of digital transformation (DT). Due to DT's cross-functional nature and the far-reaching tasks involved, CDOs must wield sufficient influence to manage DT effectively. Thus far, we lack a profound understanding of how CDOs' power is composed. To address this research gap, we conducted a multiple-case study drawing on 25 interviews across six case companies. We identify several drivers of CDOs' power, both in terms of formal and informal power types. Particularly, we demonstrate that CDOs' power depends not only on organizational contingencies but also on the managers' personal characteristics. We contribute to literature by adding a power notion to discussions on DT in general and CDOs specifically. Further, we sensitize practitioners to establish the CDO role in a way that is endowed with sufficient power and shed light on how CDOs can increase their power base.

Keywords: Chief Digital Officer, power, digital transformation, governance, case study

1. Introduction

Today's world is shaped by digital innovations that materialize at an ever-increasing pace and impact the economy with recurring disruptive changes (Yoo et al., 2012). To cope with the opportunities and challenges brought about by emerging digital technologies, firms need to transform their mindset, structure, and ways of creating and capturing value, thus embracing a digital transformation (DT) (Carroll et al., 2023). Considering the endeavor's scope, severity, and profound challenges associated, a DT must be anchored in the corporate strategy and driven by the top management team (TMT) (Wrede et al., 2020). Yet, due to DT's complexity and necessary adjustments across the entire company, top managers already employed often cannot handle DT in addition to their original duties (Tumbas et al., 2018). In response, many firms create a new C-level position dedicated to DT, the so-called Chief Digital Officer (CDO) (e.g., Haffke et al., 2016; Kunisch et al., 2022).

However, establishing a CDO position is no panacea for DT as the CDO role's concrete set-up is challenging, mirrored in relatively short CDO tenures (Firk et al., 2021). Given DT's cross-functional nature and the intertwining of business and technology in modern organizations (Hess et al., 2016), CDOs need sufficient enterprise-wide authority to fulfill their broad responsibilities and successfully implement their digital agenda (Singh et al., 2020). Besides, the CDO is an emerging executive role, which raises imbalances in the TMT and induces fights for legitimacy in the broader organization (cf. Menz, 2012). Therefore, CDOs must be equipped with a certain degree of power to surmount resistance and influence critical strategic decisions within the company (Tumbas et al., 2018). Indeed, power is considered essential for achieving strategic change since it serves as "the mechanism by which conflict gets resolved" (Pfeffer, 1981, p. 70) and is key to overcoming inertia (Besson & Rowe, 2012). Yet, research in the power realm is scarce in the IS discipline (Simeonova et al., 2018) and our knowledge of the factors leading to a pronounced clout of CDOs is in its infancy. Thus, we pose the following research question: *What constitutes CDOs' power in organizations?*

To address our research question, we carried out a positivist multiple-case study (Paré, 2004). Specifically, we examined six companies by conducting interviews with the CDO and other cross-functional stakeholders in each case, resulting in 25 interviews. Drawing on the case data, we identified several drivers of CDOs' power in organizations and clustered them in terms of formal and informal power types (Peiró & Meliá, 2003). With our results, we contribute to research on top managers' power by applying the power concept to a new functional executive, i.e., the CDO. Furthermore, we add to discussions on DT governance by arguing that the CDO role must be endowed with sufficient power to meet its responsibilities. For practitioners, we provide guidance on how companies might frame the CDO role and how CDOs can actively shape their position.

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2. Conceptual background

2.1. DT and CDOs

Digital technologies afford firms myriad opportunities to reinvent themselves by acquiring digital capabilities and creating novel business segments (Hess et al., 2016). Yet, they also present immense challenges due to the impact on both companies' internal and external environments (Vial, 2019). Customers' habits change, innovation cycles shorten, and competitive pressures mount, compelling businesses to fully utilize digital technologies to maintain competitiveness (Verhoef et al., 2021). In response, companies embark on far-reaching organizational transformations, so-called DTs. DT is a new phenomenon (Baiyere et al., 2023), thus requiring clear labeling (Markus & Rowe, 2023). This paper follows Carroll et al. (2023, p. 347), who define DT as "the profound and accelerated transformation of business and organizational activities, processes, competencies, and models to fully leverage the opportunities of the digital era". Compared to other works that only refer to DT when a new organizational identity is created (Wessel et al., 2021), this definition implies a broad understanding of DT and relates to strategic changes brought about by digital technologies.

Due to DT's high complexity and cross-functional reach, central coordination is vital (Chanias et al., 2019), rendering the TMT critical to the DT effort (Wrede et al., 2020). Historically, IT-related issues were assumed to fall under the auspices of the Chief Information Officer (CIO) (Haffke et al., 2016). While the CIO role is often expanded from a technologist to a business strategist (Weill & Woerner, 2013), DTs' complexity and dynamics pose challenges to managing DT tasks in addition to the CIO's original responsibilities (Tumbas et al., 2018). Thus, companies are increasingly hiring top-level executives with a dedicated focus on DT, namely CDOs (e.g., Haffke et al., 2016; Kunisch et al., 2022). CDOs are entrusted with various aspects of DT management and share responsibility for developing and implementing a DT strategy (Tumbas et al., 2017). Previous literature dealt with antecedents of CDO presence (e.g., Firk et al., 2021; Kunisch et al., 2022), the role of the CDO in the organization (e.g., Singh et al., 2020; Tumbas et al., 2018), and consequences of CDOs' deployment (e.g., Drechsler et al., 2019; Firk et al., 2022). Researchers particularly delineated different CDO role types, each with a particular task focus (Haffke et al., 2016; Singh & Hess, 2017; Tumbas et al., 2017). Yet, while the remits of the various CDO types are quite precisely defined, we lack an understanding of how CDOs can successfully implement their digital agenda, especially since many tenures are relatively short (Kunisch et al., 2022). Here, the power concept is crucial, as the ability to shape corporate strategy depends on whether top managers possess the necessary power to be influential (Greve & Mitsuhashi, 2007).

2.2. Top managers' power

Top managers' baseline leverage is enshrined in the notion of managerial discretion (Wangrow et al., 2015), which defines "whether an organization's form and fate sit totally outside the control of its top managers, completely within their control, or, more typically, somewhere in between" (Finkelstein & Boyd, 1998, p. 180). Yet, while managerial discretion refers to managers' latitude in general, distinct TMT members have unequal power bases, allowing them to affect the firm to different degrees (Finkelstein, 1992). Power is defined as "the ability to get things done the way one wants them to be done" (Salancik & Pfeffer, 1977, p. 14). Thus, power is an inherently relational property that denotes the extent to which an actor can influence others' actions to attain a desired outcome (Pfeffer, 1981). Notably, power refers to the potential influence that can be wielded, while manifest influence signifies the influence actually exerted (French & Raven, 1959).

Power is a multifaceted concept that accrues in various ways, including organizational rules and hierarchies, resource command to reward or sanction others, and esteem acquired through interpersonal relations (Pfeffer, 1981). A widely accepted distinction of power sources is the dichotomy between formal and informal power, representing two dimensions of the same construct yet having different theoretical grounds (Greve & Mitsuhashi, 2007). Formal power refers to the power an organization vests in a role by assigning decision-making authority and resources whose distribution is related to hierarchal considerations (Peiró & Meliá, 2003). Thus, it is pegged to positions rather than individuals, assuming that "lower participants recognize the right of higher-ranking participants to exercise power, and yield without difficulty to demands they regard as legitimate" (Mechanic, 1962, p. 350). Formal power is based on the ability to reward or coerce others through formal position (cf. French & Raven, 1959), e.g., by controlling the flow and distribution of specific information in a top-down manner (Peiró & Meliá, 2003). In contrast, informal power stems from knowledge and expertise, cooperation with influential stakeholders, and support from subordinates (Pfeffer, 1981). An individual accumulates it due to personal, relational, or situational characteristics (Blau, 1964). Hence, informal power is not attached to a position but is based on an actor's superior particular abilities, skills, and experience (Peiró & Meliá, 2003).

Building on Markus' (1983) seminal work, studying firms from a power stance is gaining traction

in the IS discipline (Simeonova et al., 2018). When examining the power of individual actors – such as the CIO – most studies focus on formal power (e.g., Preston et al., 2008). Yet, formal and informal power do not always covary. Studies indicate that hierarchy accounts for only a part of the variance in power bases (e.g., Peiró & Meliá, 2003), requiring a mutual examination of both power types to holistically understand CDOs' clout.

3. Methodology

We drew on a positivist multiple-case approach to understand what constitutes CDOs' power, i.e., identify drivers of CDOs' power in organizations. Positivist case studies assume fixed relationships within a certain phenomenon that can be objectively analyzed, allowing to capture practitioners' knowledge in these fields (Paré, 2004). We relied on this approach for two reasons: First, our understanding of CDOs' power is limited and a case study is appropriate for generating insights into new research areas (Yin, 2018). Second, case studies are most suitable for understanding intricate issues in a real-life context, where a holistic and in-depth investigation is needed (Paré, 2004). This is apposite given the multifaceted nature and relativity of power, which is highly contingent on each company (Finkelstein, 1992).

In line with the multiple-case approach, we gathered data from six unrelated cases to increase the comprehensiveness of our results. Our study follows established guidelines to address the call for methodological rigor in positivist case research (Paré, 2004; Yin, 2018). We employed purposeful sampling for case selection, allowing us to examine particularly information-rich cases (Patton, 2014). We included companies if they fulfilled the following three criteria: (1) the company has to be a well-established player in the industry and not born-digital; (2) the company must be susceptible to DT and in the middle of its transformation journey, i.e., it has embarked on a DT journey but not yet completed it; (3) the company must have installed a CDO at least one year ago, who is entrusted with managing DT in a cross-functional fashion, i.e., occupies a central position in the firm (Singh et al., 2020). The final sample consists of six German firms. Aside from the commonalities due to our selection criteria, the organizations differ in size, industry, and business relations. In addition, the reasons for creating the CDO role vary. Some firms emphasize internal affairs in the CDO's duties (e.g., fostering a digital mindset), while others target the market (e.g., developing digital products). CDOs were employed internally in three companies; in the others, they were recruited externally. The disparity of the cases allowed us to compare them for commonalities and differences that are not industry- or firm-specific, thus enhancing the analytical generalizability of our findings (Yin, 2018). Following Miles et al. (2018), we relied on semi-structured interviews as primary data source to gather rich empirical data. We recruited participants through the authors' network and LinkedIn. Specifically, we identified eligible companies by first approaching the CDO and then establishing further contacts within the company that we expected would provide information pertinent to our research question (Paré, 2004). In addition to the CDOs' perspectives, we added the views of key decision-makers (e.g., TMT members), cross-functional stakeholders (e.g., directors), and employees (e.g., DT specialists). The various angles support the research to consider different experiences and individual cognitions that provide both a self-assessment and an outside perspective to thoroughly grasp the drivers of CDOs' power. We conducted between three and five interviews per case, resulting in 25 semi-structured interviews. Table 1 gives an overview of the case companies and interview partners.

We designed a semi-structured interview guideline based on open-ended questions that enabled us to follow

Table 1. Overview of case companies and interview partners

Case	Industry	Empl.	Rev.	Reason for CDO role (year: focus)	Interview partner
InsurCo	Insurance (B2B)	10,000-15,000	~40 bn €	Approaching DT initiatives holistically and setting up a digital agenda (2021: external)	CDO (*Ins-1*); DT Specialist (*Ins-2*); CIO (*Ins-3*); IT Specialist (*Ins-4*); Controlling Manager (*Ins-5*)
FinCo	Financial Services (B2C)	1,000-5,000	~10 bn €	Accelerating internal/external DT to meet pressure from FinTechs (2020: internal)	CDO (*Fin-1*); Director (*Fin-2*); DT Specialist (*Fin-3*)
MachineCo	Engineering (B2B)	5,000-10,000	~1.0 bn €	Driving external DT by developing digital product innovations (2017: internal)	CDO (*Mach-1*); DT Specialists (*Mach-2*; *Mach-3*); CIO (*Mach-4*); Vice President (*Mach-5*)
TechCo	Technology (B2B)	5,000-10,000	~0.7 bn €	Providing impetus for DT and fostering a digital mindset (2018: external)	CDO (*Tech-1*); Director (*Tech-2*); IT Specialist (*Tech-3*)
ConCo	Construction Supply (B2B)	1,000-5,000	~0.2 bn €	Establishing digital value chains to maintain market leadership (2021: external)	CDO (*Con-1*); Vice President (*Con-2*); DT Specialists (*Con-3*; *Con-4*); Project Manager (*Con-5*)
MediaCo	Media (B2C)	500-1,000	~0.1 bn €	Developing digital products to counter shrinking core business (2019: internal)	CDO (*Media-1*); CEO (*Media-2*); DT Specialist (*Media-3*); CIO (*Media-4*)

up on responses and allowed participants to elaborate on their perceptions and experiences (Paré, 2004). The guideline drew on our research question, current literature, and case study guidelines (Yin, 2018). Following an introduction to the research project, general questions regarding the DT, and establishment of the CDO role in the company, the interviews were guided primarily by three key issues: (1) the CDO's positioning in the company; (2) the CDO's relationship with other stakeholders in the firm's internal and external environment; and (3) the CDO's competencies, experiences, and references. We coupled each part with an assessment of the impact on CDOs' power. We slightly adjusted the interview guideline depending on whether we interviewed a CDO or non-CDO.

The interviews were recorded and transcribed verbatim, allowing us to analyze the data rigorously and transparently (Paré, 2004). We performed several coding cycles for our data analysis, i.e., open coding, axial coding, and selective coding (Corbin & Strauss, 2008). First, we used open coding to inductively identify concepts related to CDOs' power while remaining as open and unconstrained by prior theory as possible. During this phase, we constantly compared respondents' statements with the aim of grouping answers that referred to common codes. Hence, emerging concepts were refined in cycles of simultaneous data collection and analysis, leading to 27 distinct first-order concepts. Second, during axial coding, we thematically subsumed and integrated the list of descriptive codes generated during open coding

to infer more abstract categories. This process resulted in the derivation of ten second-order themes. Finally, we performed selective coding to deductively cluster the second-order themes along a formal and informal power dimension (Peiró & Meliá, 2003). Figure 1 depicts the data structure. During coding, we alternated back and forth between analysis of the empirical data and theory, implying that the steps described here are not strictly sequential phases. Two researchers performed the coding independently. Differences were discussed mutually and settled consensually (Miles et al., 2018).

4. Results

4.1. CDOs' formal power

Organizational anchoring. In all case companies, it transpired that CDOs need to be placed at a high organizational level to ensure influence: "*DT will play a central role for us in the next years, which is why the [CDO] role fits well at the board level*" (Fin-1). Similarly, the interviewees considered a direct reporting line to the CEO conducive to the CDO's influence, as this allows topics to be placed at the uppermost level without any detours. In some cases, the organizational structure has been adapted to reflect the dynamics of DT. For instance, FinCo decided to implement a network organization, increasing internal speed in driving DT initiatives while also supporting the CDO's cross-functional role by reducing the need for reconciliation loops and, thus, enabling operational
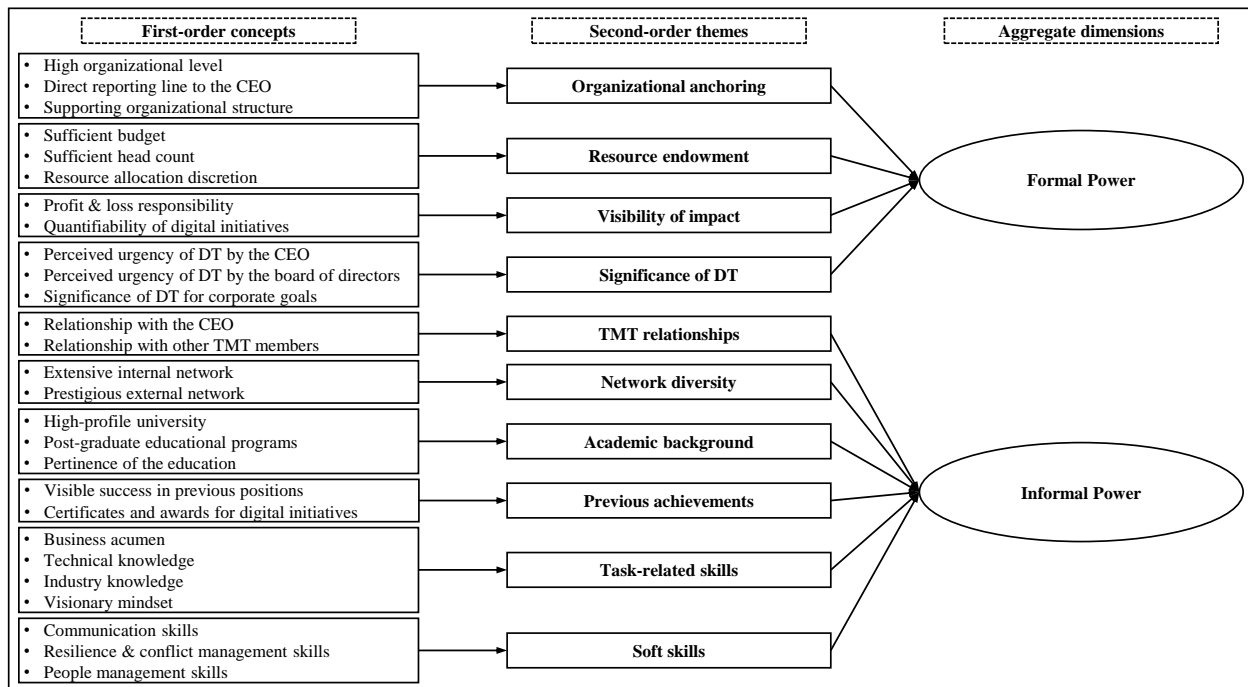

Figure 1. Data structure

authority. Following a similar approach, MachineCo created a DT unit led by the CDO and organized it in an agile matrix structure to drive pervasiveness across business units. In contrast, ConCo had not thoroughly entrenched ways of working in DT with cross-functional stakeholders, established frictionless interfaces, and supported employees to think beyond prevailing silos. This restricted agility and complicated alignment, rendering it trickier for the CDO to exert influence.

Resource endowment. Many interview partners stressed that CDOs need sufficient budget and head count to pursue their agenda. In each case, CDOs had ample financial resources at their disposal. This applied particularly to MediaCo's CDO, whose digital division got the highest budget of the entire organization. Besides the sheer financial resources, most CDOs interviewed were relatively unrestricted in deciding which digital initiatives to spend their budgets on. However, InsurCo's CDO had to confer with all three board members when launching DT initiatives, which required tight coordination and allowed for less discretion in decision-making. While financial aspects were no constraint, limited personnel resources at InsurCo, ConCo, and MediaCo restricted the CDOs' ability to drive initiatives and made them rely heavily on cross-functional support: "*In our case, [the CDO] is not yet provided with a lot of power. There is no entire department, no entire team behind it. The CDO is rather dependent on the cooperation of the business and the classic line organizations*" (Ins-3). But even when CDOs had a sufficient head count at their disposal, they often struggled to attract talent, especially in traditional industries (e.g., MachineCo and ConCo). Here, digital know-how was missing, limiting internal speed and possibilities to drive complex DT initiatives.

Visibility of impact. All interviewees pointed out that profit & loss responsibility increases the CDO's power. However, except for TechCo's CDO, none of the CDOs examined held such profit & loss responsibilities, implying that they acted as facilitators driving digital initiatives in other departments. Thus, their impact was not directly measurable, which reduced their clout. For instance, ConCo's CDO struggled to elucidate the revenue the digital initiatives generate, leading to internal headwinds: "*We can very precisely say how much money is spent because of us. How much money is earned because of us? Unfortunately, not at all so far. [...] It's such a pain point that we can't show how much success we've had or how much more turnover has been achieved*" (Con-4). Congruously, it was highlighted that demonstrating the impact of DT initiatives by showing business cases and calculating meaningful performance indicators is paramount to ensure CDOs' leverage.

Significance of DT. In all cases, it was emphasized that the CDO possesses considerably more power if the CEO has recognized the importance of DT for the company. Hence, the CEO's perceived importance of DT influences the CDO's assertiveness. Especially the CEO of MediaCo made DT one of the key priorities: "*On a scale of 1 - 10, [the importance of DT] is 11. [...] We are between the phase of conscious incompetence and conscious competence, so DT has not become second nature. We strive for unconscious competence so that no one has to think about how we act [in the digital space] and we don't have to make an effort. It just comes naturally*" (Media-2). Due to DT's extremely high (perceived) importance, the CDO role got completely different backing in the organization. Yet, the perceived relevance of DT by the CEOs also affects the extent of their operational involvement in DT, which, in turn, restricts the CDOs' scope of action. Additionally, the CEOs' willingness to take risks – frequently dependent on whether the CEO is the company's owner (e.g., at TechCo and MediaCo) – plays a key role in CDOs' opportunities to experiment and seek risky endeavors beyond the stable core business. This presents a trade-off between efficiently using resources to push the DT and unleashing CDOs' full potential. Moreover, CDOs depend on the board of directors' support to reinforce their influence. It is essential that the board of directors recognizes the significance of DT for future competitiveness and is committed to digital initiatives. For example, at MachineCo, the board members had low digital literacy but grasped the increasing relevance of DT and, thus, offered their support to the CDO: "*DT is a major topic for us, and you can't establish something like that without the full backing of the board of directors*" (Mach-5). This support was further reflected in including DT in the corporate goals, which raised the internal priority of DT and enshrined the CDO's influence. Finally, weaving digital topics into the corporate strategy commits relevant stakeholders to DT. All interview partners concurred that a digital vision reduces conflicts, prevents de-prioritization, and increases the focus on DT, thus strengthening CDOs' positions. For instance, ConCo established a corporate strategy based on three pillars, one of which is DT. This enabled the CDO and the digital team to exert a high level of influence from the outset: "*The strategy with the three pillars was developed from September 2020 to April 2021. Digitalization is one of these pillars [...]. Thus, we now have three major projects that cut across the company. [...] And in this respect, this mindset [for the relevance of DT] is definitely there*" (Con-1).

4.2. CDOs' informal power

TMT relationships. Throughout the case studies, it was mentioned that a supportive relationship with the CEO, characterized by regular exchanges and full trust,

promotes CDOs' power. To secure internal standing and influence, CDOs need the full backing of the CEO, which doesn't accrue overnight but must be nurtured. Thus, CDOs who move into the role internally have a head start. For instance, MachineCo's CDO previously served as an assistant to the CEO, leading to sufficient support right from the beginning. Yet, externally appointed CDOs can also establish a trust-based relationship with the CEO. TechCo's CDO had succeeded in building a close bond with the CEO since taking office in 2018, granting the credibility to drive digital initiatives even amid resistance: "*I have a very personal relationship with [the CEO]. I have long left this fence 'CDO' [...]. I can change things fundamentally because I have the borrowed authority of the CEO and, thus, can work even against brutal resistances*" (Tech-1). DT is not the sole responsibility of the CDO and CEO but requires the joint efforts and alignment of the entire TMT to be successfully crafted. Therefore, a trusting and collaborative relationship with other TMT members is regarded as critical for the CDO to obtain their support and consequently be influential: "*If this is a common theme and entrepreneurial thinking, then this model works well. But suppose conflicts arise because there are perhaps different priorities [...]. In that case, it can lead to a toothless tiger effect, and you have to fight very hard and sometimes even escalate the situation to make any progress*" (Ins-3). While the collaboration between the CDO and further CxOs was described as well-balanced and harmonic at FinCo and ConCo, there was some friction at the other companies, mainly attributable to the different attitudes of the various TMT members towards DT. In particular, some were less inclined to back DT initiatives because they feared the complexity and were reluctant to change their established ways of working. This resistance led to internal misalignment and conflicting goals, thus complicating the CDOs' work and reducing their influence, as observed at MachineCo: "*I would say there is still particular potential [...] in the cooperation within the [TMT]. It is always said that there is a leadership team. And then I feel that the [TMT] is not a real team among themselves. Rather, they are lone fighters. They [...] have their focus, their structure, their strategy, but don't pursue a common strategy and vision*" (Mach-2). Driving successful DT projects and highlighting their merits to the CxOs' areas help CDOs to gain commitment from hesitant TMT members. Further, transparency about digital initiatives and sound communication strengthen the relationship between the CDO and other CxOs, thus bolstering the CDOs' position. For instance, not all TMT members supported the creation of the CDO role at MediaCo. To reduce the objections, MediaCo's CDO engaged in open discussions, clearly expressed the vision, and demonstrated the benefits, gradually gaining the TMT's support: "*It was [...] long about getting the buy-in from the colleagues. The basis of the approach is: Problem definition is half problem solution. So, to write down the problem and then discuss it with each other*" (Media-1).

Network diversity. Throughout the cases, internal networking with key decision-makers and best practice sharing between employees enabled CDOs to be valued stakeholders, which led to more influence. In addition, all CDOs participated in external networking activities. This strengthened their reputation in the industry and provided inspiration for their organization. Building and nurturing their external network was well received by the management and employees, especially if they also benefited from the network: "*Through [the CDO's] outstanding network, you get very cool impulses. If you get stuck, [the CDO] usually always knows someone who can provide support. His network is super valuable for me*" (Fin-2). In some cases, fundamental decisions for the entire industry were discussed with external partners in a broader ecosystem, making networking vital to avoid missing out on decisive developments: "*This [industry ecosystem] is more than just a network as we seek to develop interoperable solutions for the market [...]. Every machine manufacturer is trying to build up its digital portfolio for the time being. The next logical step is moving closer together and creating aligned interfaces [...]. We must unite forces to create a digital ecosystem. That is a major task*" (Mach-1). The interviewees acknowledged that participation in such key decisions enhances the CDO's standing in the firm.

Academic background. Most CDOs consciously enrolled at a renowned university, contributing to their reputation. For instance, FinCo's CDO completed a program at a top-tier international university, offering excellent education and prestige. Besides, the CDO still actively used the network built during the years of study to initiate knowledge exchange with successful alumni and to keep abreast of business developments. Further, many CDOs pursued high-level post-graduate courses and doctoral studies, which enabled them to accumulate critical competencies, thus adding to their prestige. Finally, the interview partners emphasized that education programs pertinent to DT, i.e., technical or business degrees, particularly substantiate the CDOs' measures. TechCo's CDO, for example, earned an MBA after completing a technical degree to deliberately signal business acumen: "*In all the steps that I've done, I've always had a profound understanding of why I'm doing this. Always out of ambition*" (Tech-1).

Previous achievements. In all cases, it was stressed that relevant experiences promote CDOs' legitimacy. These may have been attained in the current or former company. CDOs who move into the position internally could already forge a reputation and internal

acceptance through successfully implemented digital projects. MediaCo's CDO held various functions at MediaCo related to digital processes before moving into the CDO position, which underscored the manager's cachet from the outset: "*It was good to take a person for this role that comes from the digital forge of [MediaCo], who has tried to establish everything digital over the last few years. He's been there, co-founded things, seen what's possible in the digital realm, experienced what can be achieved, and what kind of culture exists*" (Media-3). CDOs who previously worked in other firms can build prestige if the former experience was gained in the same industry and was directly recognized in the present company. For example, in a previous role, InsurCo's CDO pioneered digital processes that were deployed across the industry. Similarly, FinCo's CDO acquired relevant expertise in prestigious companies in the banking sector before founding a successful start-up. These experiences led to a pronounced standing from the beginning, even without an internal background: "*First and foremost, [this] gives him a little superhero status and makes people look at him differently*" (Fin-2). Finally, awards for digital initiatives contribute to CDOs' internal and external reputation. This was evident in the case of TechCo's CDO, whose digital initiatives were recognized by a major business magazine, thus placing the manager in the spotlight.

Task-related skills. In line with CDOs' job profiles, technical and business competencies must be combined to perform the role effectively. In all cases, it was emphasized that diverse skill sets and core competencies increase the weight of the CDOs' decisions. However, the focus should be on the business side: "*A CDO has to understand [...] how data and figures speak [...] because, at the end of the day, you don't do it because it's somehow fancy and sexy, but the CDO role is very strongly linked to economic success*" (Media-2). Besides, at InsurCo, MachineCo, and MediaCo, it was highlighted that industry knowledge fosters the CDOs' credibility. Still, even if industry knowledge certainly helps, the interviewees indicated that digital expertise is more critical to the CDO position as this confers power within the company: "*I don't have a clue about the construction industry [...], but I have experience in digitalization and corporate transformations in small and medium-sized enterprises. I can do that. I don't know anything about construction processes or the customer journey, but if you have experts for that and trust me to work with them, we'll get it done*" (Con-1). Finally, visionary behavior was valued in all cases and considered to promote the CDOs' authority. More precisely, questioning the status quo and acting as a disruptive factor allowed CDOs to improve existing processes and speed up DT. For instance, MachineCo's CDO was described as very

passionate about DT topics: "*What sets him apart is an incredible passion for [DT], perhaps even tenacity*" (Mach-2). Especially interviewees from industries that are particularly affected by DT (e.g., the media industry) valued such a visionary mindset in their company: "*That is where we want to go, radically cutting off old habits [...]. Media firms are strong at trying out new things but tend to be too weak to let go the old*" (Media-4).

Soft skills. Communication skills were cited as a driving factor of CDOs' power. Communication is crucial in persuading stakeholders of the CDO's vision and creating a unified direction. By highlighting digital success stories, CDOs can craft a narrative around DT, increase transparency, and sharpen the internal digital mindset. As a result, employees are more involved in the DT and do not feel left behind, leading to cross-functional support and, thus, more leeway for the CDOs. While such communication was pronounced at most of the companies studied, some pent-up demand was identified at TechCo: "*Some fear the change and think, 'What will happen to me? What will happen to my job?' [...] We could have informed the employees of [TechCo] more and taken them with us on the DT journey*" (Tech-3). Furthermore, DT often requires profound changes, especially in traditional companies. Typically, neither management nor employees will unconditionally support these changes. Consequently, CDOs need high resilience and should not be afraid to enter open discussions to find a joint solution: "*If I send him [the CDO] away, he returns. [...] I have to have the conversation. He is also one of the people who keeps poking [MediaCo's] people, including the management, one who is always [...] standing behind with the needle*" (Media-4). However, even though the CDOs tolerate emerging conflicts, it was noted that they should not impose every – especially subordinate – initiative at all costs. This testifies to reflection and allows crucial issues to be enforced even in the face of resistance. Additionally, people management skills were key to the CDO's influence in all cases. There are often disparate views on DT, with CDOs' perseverance and sensitivity to different employee groups seen as beneficial in driving DT forward: "*I think the CDO has to have an excellent knowledge of human nature so that you can develop a feeling in all directions, how something is received, going towards finding solutions and thereby also choosing creative approaches and bringing along sufficient pragmatism*" (Ins-3). As indicated before, many firms lack digital talent. As a countermeasure, CDOs set up programs to increase digital literacy, thus boosting internal implementation possibilities and increasing the feasibility of CDOs' initiatives. For example, several training opportunities were offered at MachineCo: "*There is a Digital Thursday, where employees can learn more about digitalization topics*

during their working hours" (Mach-3). Moreover, many CDOs examined preferred a supportive leadership style to challenge and encourage their staff. Empowering their employees allowed these CDOs to use their time efficiently and reach decisions quickly. In particular, FinCo's CDO emphasized the importance of trusting relationships with employees: "*The traditional view is: Employees are either stupid or criminals, which is why I have to control them. But I trust [FinCo's] employees completely. And then I can invest my time, which I no longer need for controlling, elsewhere. [...] It is important to try out many things, to have courage, to make mistakes, to learn from them [...] and if something does not work, then try something else*" (Fin-1).

5. Discussion

DT presents companies with a plethora of challenges requiring a dedicated DT governance approach (Hess et al., 2016; Wessel et al., 2021). When companies assign a CDO to spearhead their DT, the latter must embrace the necessary changes in a cross-company fashion (Tumbas et al., 2017). To succeed in this endeavor and, thus, to comprehensively manage DT and timely react to dynamics, CDOs need sufficient authority (Singh & Hess, 2017), especially as DT is "a 'moving target' that seems to be continuously in the making, with no foreseeable end" (Chanias et al., 2019, p. 28). Hence, CDOs' power is a prerequisite for successful DT in companies that have installed such a top management position. In our analysis, we unearthed several factors conducive to CDOs' power. In particular, we found empirical evidence that not only CDOs' formal power must be considered but also their informal power stemming from their qualifications, skills, and abilities. To achieve sustainable organizational change, i.e., succeed in DT, informal power sources are crucial, as they persuade peers and subordinates to follow the CDOs' ideas and proposed initiatives. This is supported by former research, which suggests that resolving conflicting interests with an integrative approach rather than using formal power eventually leads to reciprocity, thereby inducing cooperation (Peiró & Meliá, 2003). By contrast, excessive use of formal power negatively affects organizations' long-term health as it inhibits motivation and leads to poor productivity (Yukl, 1989).

Notwithstanding, our results indicate that formal power has high pertinence as it can be harnessed to initiate action, e.g., against resistance in TMT. A lack of formal power prolongs decision-making since this form of power serves as the mechanism for conflict resolution (Finkelstein, 1992). Hence, especially for CDOs, who – by role definition – operate in multiple domains and at different hierarchical levels, it is crucial to achieve a delicate balance of formal and informal power to

succeed with their digital agenda. Accordingly, we need to jointly examine CDOs' formal and informal power to holistically grasp their clout in the organization.

The different drivers within the two power types do not act in isolation but are highly interrelated. For instance, the significance of the firm's DT influences the organizational anchoring and resource endowment of the CDO (*formal power*). In terms of *informal power*, a profound academic education is reflected in the CDOs' skills, i.e., their technical and business expertise (Sciuk & Hess, 2022). Besides, the two power types are not mutually exclusive but interact with each other (Yukl, 1989). Accordingly, we also found interdependencies between CDOs' formal and informal power. For instance, a high anchoring in the organizational structure (*formal power*) results in a relationship with other CxOs on equal terms (*informal power*), facilitating collaboration (Firk et al., 2022). Vice versa, substantial prestige, for example, based on reputation and success in previous jobs (*informal power*), often leads to the CDO only joining the company in a correspondingly high-ranking role (*formal power*). Figure 2 offers a conceptualization of CDOs' power in organizations.
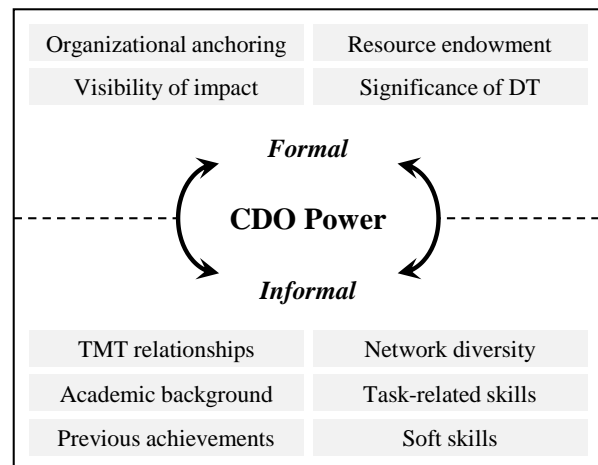
Figure 2. Conceptualization of CDOs' power

Power is no static concept but rather fluid, with an actor's power constantly changing over time (Pfeffer, 1981). Thus, power is transformable and "produced from one moment to the next, at every point, or rather in every relation from one point to another" (Foucault, 1982, p. 218). Referring to CDOs' power, we, therefore, argue that CDOs can directly affect certain factors to enlarge their power base. Regarding *formal power*, many companies' hierarchical configuration, organizational structure, and resource distribution are determined for an extended period (Schwarz, 2012). Moreover, CDOs have limited scope to amend the perceived urgency of DT by the CEO and the board of directors. Yet, there is latitude in demonstrating the impact of digital initiatives. Here, CDOs can highlight

the added value for the company and underpin this with concrete measures, for example, concerning digital business performance or the realized external and internal DT (Verhoef et al., 2021). Regarding *informal power*, CDOs have more leeway to nurture their power base. For instance, CDOs can constantly cultivate their digital expertise and promote their industry knowledge by participating in trade fairs, industry events, or similar occasions. Besides, CDOs might foster collaboration with the CEO and other TMT members by seeking constant interaction, honoring agreements, and recording successes in DT (Singh & Hess, 2017). Finally, they can actively expand their network, for example, by engaging in regular exchanges with internal and external stakeholders (Tumbas et al., 2017).

6. Contribution, implications, limitations

Our contribution to academia is twofold. First, we extend research on a specific functional role in the TMT (cf. Menz, 2012), i.e., CDOs. Previous studies primarily focused on antecedents of CDO presence (e.g., Firk et al., 2021; Kunisch et al., 2022) and different CDO role types (Haffke et al., 2016; Singh & Hess, 2017; Tumbas et al., 2017), but do not shed light on potential sources of CDOs' short-lived tenures and difficulties to turn firms around. More precisely, there is little evidence on how CDOs can flourish in the firm, especially given their roles' cross-functional nature. Our study provides exploratory insights into drivers of CDOs' power by highlighting the salience of formal and informal power factors. While many studies merely refer to formal power, we particularly stress the weight of CDOs' informal power. Besides, we argue that certain factors can be influenced, i.e., there is leeway for CDOs to increase their power. Second, we add to the power literature. With rare exceptions (e.g., Preston et al., 2008), the unit of analysis in power studies is the CEO or the entire organization. Thus, this paper is one of few to examine a non-CEO executive and the first to analyze the CDO in this realm. Moreover, power is multifaceted and several subtleties need to be clarified (Greve & Mitsuhashi, 2007). The multiple-case study approach enabled us to examine CDOs' power in depth in real-world contexts, yielding more fine-grained results.

In addition, the findings hold implications for practice, both for key decision-makers in firms undergoing a DT and for CDOs themselves. First, companies that have decided to introduce a CDO role need to position it sufficiently high in the organization to give the CDO adequate clout to perform the cross-functional role. In this regard, fostering efficient cooperation and alignment between the CDO and the TMT is vital. Besides, CEOs should act as paragons by constantly urging the importance of DT, thereby endowing the CDO role with legitimacy. When hiring a CDO, key decision-makers must be aware that not only formal aspects determine the CDOs' power but that personal, i.e., informal, factors are also influential. Second, we inform CDOs that their power base is not fixed but can be amended. CDOs seeking to increase their cross-functional influence might ultimately have more success in implementing their digital agenda.

Our study is not devoid of limitations, which also present opportunities for future research. First, it is not likely that all derived factors contribute equally to CDOs' power. Yet, it is beyond the scope of this paper to empirically test the strength of the determinants. Thus, a subsequent quantitative investigation could supplement and validate our findings. Second, although we built on a broad sample in line with our purposeful sampling approach (Patton, 2014), we did not distinguish between firm and industry specifics in our results. It is conceivable that distinct factors of CDOs' power have a higher weighting in certain contexts. Further research could emphasize organizational peculiarities – such as the advancement of DT (Verhoef et al., 2021) – and apply in-depth case studies to paint a more fine-grained picture of CDOs' power. Finally, the present results reflect a snapshot. DT is a highly dynamic process and the CDO role is subject to constant change (Tumbas et al., 2018). Thus, research could build on the current findings to examine how the identified driving factors of CDOs' power change as DT progresses and the CDO position becomes established.

7. References

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