Fight the good fight!

How conflict matters for supervisory boards in educational organisations

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Fight the good fight!
How conflict matters for supervisory boards in educational organisations

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Table of Contents

Summary

Good governance is critical for both private and public institutions, ensuring proper oversight of financial management and quality of service. In the field of education incidents of financial mismanagement and poor education quality, such as the Amarantis in 2012 and ROC Leiden in 2015 highlighted failures in governance, particularly the absence of effective supervisory boards. Despite the inevitable evaluation reports critically assessing supervisory boards and recommending more rules and regulations to improve their oversight, what actually makes supervisory boards effective remains unclear. The central proposition of this dissertation is that the effectiveness of a supervisory board is determined by its behaviour rather than by its structure.

To advance research on the behaviour of boards, it is essential to develop a conceptual framework that integrates diverse studies on board behaviour. Such a framework enables to interconnect studies and fostering a more comprehensive understanding of the behavioural factors influencing board effectiveness. This dissertation therefore advances research on boards of directors by developing a researchable theoretical framework of the behavioural determinants of the effectiveness of boards in general and supervisory boards of education organisations in particular.

Chapter 1 introduces the quest, in both corporate governance studies as well as in research on non-profit and educational governance, for the antecedents of effective governance arrangements, especially in the design of the (supervisory) board of directors. Chapter 1 builds a theoretical framework for the behavioural study of supervisory boards of directors building on the growing literature on behavioural corporate governance and especially on the modelling of boards as decision-making teams, with particular focus on the role conflicts play in the effectiveness of boards.

Chapter 2 reviews the empirical research on boards as decision-making teams. Through a meta-analysis of 17 primary studies, it clarifies what is known and identifies potential methodological distortions. The findings suggest that effort norms and the use of knowledge and skills are strongly linked to better board performance, while the role of conflict is more ambiguous. The chapter

suggests that the conceptualisation of conflict in research needs refinement, as current operationalisations fail to capture its complexity. A more multidimensional approach, commonly used in team effectiveness literature, may be more appropriate.

Chapter 3 adopts such a multidimensional model of conflict, distinguishing between task, process, and relationship conflicts. To examine this model, a survey is developed and administered to boards of educational organisations. The findings show that task conflicts and – to a lesser extent – process conflicts positively influence board performance, while relationship conflicts have a negative impact. Furthermore, contrary to common assumptions in the team effectiveness literature, task conflicts seem to reduce relationship conflicts. Chapter 3 also highlights the roles of cohesion and participative leadership in moderating the effects of conflicts, emphasizing the need for deeper understanding of these dynamics in supervisory boards in educational organisations.

Chapter 4 extends the analysis through a longitudinal study of the dynamics between conflict dimensions, cohesion, and board effectiveness. It finds that increasing task conflict positively impacts both control and advisory performance, while relationship conflicts negatively affect the control performance of supervisory boards. Cohesion moderates these effects of conflicts, with increasing cohesion amplifying the positive effects of task conflict and conversely, decreasing cohesion exacerbating the negative effects of relationship conflict. Chapter 4 reveals how the relationship between conflict and board effectiveness evolves over time and depends on both conflict type and levels of cohesion.

Chapter 5 introduces the concept of conflict profiles, configurations of different dimensions of conflict within a board. Although prior research on conflict profiles primarily focused on artificial teams, Chapter 5 demonstrates their relevance to real-life teams such as supervisory boards. It also finds that participative leadership and conflict management play key roles in preventing a board from adopting less effective conflict profiles, while cohesion helps shift towards more effective ones.

In conclusion, this thesis makes three key contributions to the literature on board behaviour and effectiveness: it shows that conflict is a multidimensional construct, demonstrates how conflict

dimensions and board effectiveness are interrelated, and identifies recurring conflict profiles that influence board performance. This provides actionable insights that challenges conventional wisdom on avoiding relationship conflicts, suggesting that some level of conflict may actually enhance the effectiveness of supervisory boards in educational organisations. Effective supervisory boards are boards that know how to fight the good fight.

Samenvatting

Goed bestuur is cruciaal voor zowel private als publieke instellingen en bewaakt het financieel beheer en de kwaliteit van de dienstverlening. In het onderwijs hebben incidenten rond financieel wanbeheer en tekortschietende onderwijs bij Amarantis in 2012 en ROC Leiden in 2015, tekortkomingen in de governance van het onderwijs aan het licht gebracht. Met name raden van toezicht bleken onvoldoende in staat hun taak naar behoren uit te voeren. Ondanks de onvermijdelijke evaluatierapporten waarin meer wetten en regels worden aanbevolen om raden van toezicht te verbeteren, blijft onduidelijk wat raden van toezicht nu werkelijk effectief maakt. De centrale stelling van dit proefschrift is dat de effectiviteit van een raad van toezicht meer wordt bepaald door gedrag dan door structuur.

Om onderzoek naar het gedrag van besturen en raden van toezicht te kunnen doen, is het essentieel om een conceptueel raamwerk te ontwikkelen dat de verschillende onderzoeken naar het gedrag van besturen integreert. Zo'n raamwerk maakt het mogelijk om die onderzoeken te verbinden en zo een completer beeld te schetsen van de gedragsmatige factoren die van invloed zijn op de effectiviteit van raden van toezicht. Dit proefschrift schetst daarom een theoretisch raamwerk van waaruit gedrag en effectiviteit van bestuur en toezicht onderzocht kunnen worden.

Hoofdstuk 1 introduceert het onderzoek dat vanuit corporate goverance gedaan is naar effectief bestuur van bedrijven en instellingen en wordt een theoretisch kader ontwikkeld voor het onderzoek naar effectief gedrag in raden van toezicht dat voortbouwt op de groeiende literatuur over corporate governance als gedrag en de modellering van raden van bestuur als besluitvormende teams.

Hoofdstuk 2 evalueert het empirisch onderzoek dat vanuit deze stroom van onderzoek is gedaan naar raden van bestuur en raden van toezicht als besluitvormende teams. Door een meta-analyse van 17 eerdere onderzoeken, wordt duidelijk wat bekend is en welke methodologische uitdagingen dit onderzoek kent. De uitkomsten suggereren dat inspanningsnormen en het gebruik

van kennis en vaardigheden sterk samenhangen met de effectiviteit van raden van bestuur en raden van toezicht, terwijl de rol van conflicten meer ambigue is. Voor een beter begrip van conflicten in deze context is een meer multidimensionale benadering nodig, vergelijkbaar met de benadering die in onderzoek naar teameffectiviteit gebruikelijk is.

Hoofdstuk 3 past dit multidimensionaal model van conflicten toe op raden van toezicht van onderwijsinstellingen en maakt onderscheid tussen taak-, proces- en relatieconflicten. De resultaten laten zien dat taakconflicten de prestaties van de raad positief beïnvloeden, terwijl relatieconflicten een negatieve impact hebben. Bovendien lijken taakconflicten, anders dan vaak wordt aangenomen in de literatuur rond teameffectiviteit, relatieconflicten juist te voorkomen. Hoofdstuk 3 benadrukt ook de rol van cohesie en participatief leiderschap bij het managen van conflicten, waarbij wordt gewezen op de noodzaak van een dieper begrip van deze dynamiek tussen conflicten, cohesie en leiderschap in raden van toezicht van onderwijsinstellingen.

Hoofdstuk 4 breidt de analyse uit met een longitudinale studie naar deze dynamiek tussen conflictdimensies, cohesie en de effectiviteit van de raad. Het blijkt dat meer taakconflict een positief effect heeft op de controlerende en adviserende taak van raden van toezicht, terwijl relatieconflicten de controlerende taak van de raad van toezicht negatief beïnvloeden. Cohesie speelt daarbij een modererende rol, waarbij meer cohesie de positieve effecten van taakconflict versterkt, terwijl minder cohesie de negatieve effecten van relatieconflicten versterkt. Het laat zien hoe de relatie tussen conflicten en de effectiviteit van de raad in de loop van de tijd verandert en hoe conflictdimensies, cohesie en effectiviteit met elkaar verknoopt zijn.

Hoofdstuk 5 introduceert het concept van conflictprofielen, configuraties van verschillende conflictdimensies binnen een raad worden geïdentificeerd. Waar eerder onderzoek naar conflictprofielen vooral gericht was op kunstmatige teams in psychologische laboratoriums, toont dit hoofdstuk hun relevantie aan voor echte teams, zoals raden van toezicht. Het laat ook zien dat participatief leiderschap en conflictmanagement van belang zijn bij het voorkomen van minder effectieve conflictprofielen, terwijl cohesie een raad van toezicht helpt om naar effectievere profiel over te gaan.

Dit onderzoek levert drie belangrijke bijdragen aan de literatuur over gedrag en effectiviteit van raden van toezicht. Het laat zien aan dat conflict een multidimensionaal construct is. Ook toont het aan hoe conflictdimensies en de effectiviteit van raden van toezicht met elkaar verweven zijn. Tenslotte schetst het de conflictprofielen die in raden van toezicht onstaan. Dit onderzoek zet vraagtekens bij het gebruikelijke advies in managementboeken om relatieconflicten in raden van toezicht te vermijden en suggereert dat een zeker niveau van conflicten de effectiviteit van raden van toezicht in onderwijsorganisaties kan verbeteren. Goed toezichthouden is vooral een kwestie van effectief ruziemaken.

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At those moments during this journey where I myself no longer believed I would ever reach any destination, the one person who, with endless patience, never lost faith in this project - or at least managed to keep it well hidden from me, was Eelke. I am particularly grateful that along the way I had him as my unrelated namesake, as an engaged tour guide and patient navigator. After all, it did all last a bit longer than expected. Eelke, thank you for accompanying me all these years. Without you, I would never have succeeded!

List of publications

Chapter 2

Heemskerk, K. (2019). Promising avenue or dead end street? A meta analytic review of the Forbes and Milliken model of board behaviour. *Corporate Governance, 19*(3), 471-489.

Chapter 3

Heemskerk, K. (2020). The multidimensionality of conflict in supervisory boards in education in the Netherlands. *Educational Management Administration & Leadership, 48*(3), 549-569.

Chapter 4

Heemskerk, K. (2023). The vice and virtue of conflict in boards: A longitudinal study into the effect of conflicts and cohesion on the task performance of supervisory school boards in the Netherlands. *European Journal of Education*, 58(2), 314-330.

Chapter 5

Heemskerk, K. Beyond the black box: Conflict profiles as drivers of board performance. Under review in: *Corporate Governance Corporate Governance: An International Review.*

Chapter 1 Introduction[1]

How does governance matter?

Endowing a concept like 'governance' with a proper definition probably calls for a doctoral thesis in itself (Robichau, 2011). Here, therefore, I'll confine myselve to the use of governance to refer to the steering mechanisms by which organisations are managed in order to maximise social benefits (Gomez, 2004; L'Huillier, 2014). But no matter how academics wish to define it, society expects that governance matters, both in firms and in public organisations – whether it is perceived as limited to the shareholder value or whether the broader social responsibility of firms and institutions is taken into account.

In educational organisations it is crucial for governance to function well. In the Netherlands: over three million students go to school every day to lay the foundation for their further education and professional life. To enable them to do so, over thirty billion Euros from public funds is invested in educational organisations every year. It is of paramount public interest to ensure all these students a sound education and to ensure that resources are allocated adequately to this end.

The primary responsibility for the quality of education and financial management rests with the executive director(s) and is monitored by the supervisory board. Unfortunately, a series of incidents of financial mismanagement and poor quality of education, of which Amarantis in 2012 and ROC Leiden in 2015 were the most notorious, display an image of an absent supervisory board. Both educational institutions were deeply in debt for developing megalomaniac building projects. The Amarantis board even resided in a fancy office building in Amsterdam's financial district, while mice roamed the floors in their dilapidated school buildings. It made the question where the supervisory board was into a hackneyed phrase in the inevitable reports and studies following these incidents (Chin-A-Fat, Scherpenisse, van der Steen, van Twist, & Schulz, 2013; Commissie onderzoek financiële

[1] This chapter makes use of (combinations) of text excerpts from the previously published articles listed in the List of publications on page xii.

problematiek Amarantis, 2012; Commissie onderzoek huisvesting ROC Leiden, 2015). Reports and studies that often in their recommendations called for more rules and regulations for the design of internal supervision as the solution for the failures of supervisory boards.

However, did supervisory boards actually improve as a result of these reports and the public outrage? In spite of all these proposals for improvement through more rules, codes and laws, we simply do not known what the characteristics of good governance really are. The inner workings of supervisory boards are still a black box, both in corporate and in public organisations. There is a need to identify what makes boards effective. Previous research suggests effectiveness has less to do with structure and composition of the board, but rather depends on the behaviour of boards (McNulty, 2013).

The central proposition of this dissertation is that the effectiveness of a supervisory board is determined by its behaviour rather than by its structure. In this dissertation, I will therefore examine the effectiveness of supervisory boards of directors by seeking to gain insight into the behaviour and task performance of supervisory boards in educational organisations in the Netherlands. In this introduction, I will first sketch the background of the Dutch educational governance system. Next, I will briefly outline the research on boards in the broader corporate governance literature. I will then draw on this body of literature to elaborate on the research model and design of the research in this dissertation.

Educational governance in the Netherlands

The Dutch educational system of public (*openbaar*) and semi-private (*bijzonder*) educational organisations, which are both government funded yet at the same time highly autonomous, is a consequence of the so-called school struggle in the Netherlands. The school struggle arose from the competition for power during the nineteenth century between the Protestant majority and the Catholic minority, who each wanted to organise their own religious education, and the liberals who advocated a neutral and thus secular public education (Waslander, 2010). The school struggle came to an end when, after almost a century of political strife, the liberals succeeded in attaining suffrage for women and religious groups attained freedom of choice in religious education. This state-funded freedom in education is enshrined in the Dutch Constitution. It has been the subject of much debate, but has remained unchanged to this date—even after secularisation in the 1960s.

At first, the semi-private and public schools had a different mode of governance and differently structured school boards. In many cases, semi-private schools were run through an association with a board composed of parents, local religious leaders or church representatives, while the management of public schools was in the hands of the local public administration, with a board of parents and local dignitaries appointed by the municipal council. In the past decades, however, the governance structure of schools has increasingly converged. Many private schools have become detached from their founding association and merged in large foundations, while the management of public schools is almost fully devolved by local authorities to autonomous foundations. Comparable changes have also occurred in many other OECD countries (Honingh, Ruiter, & van Thiel, 2020).

Educational reforms and deregulation in the 1980s led to a further increase in autonomy and in the size of educational institutions (Karsten, 1999). In the 1990s, it became clear that the traditional governance models, where a school board consisting of volunteer parents and local notables delegated executive power to a principal, was not effective anymore for these large and autonomous organisations. This ineffectiveness led to a transition to a two-tier governance system (Klifman, 2010a).

In 2010, the functional separation of executive and supervisory directors became a legal obligation in primary and secondary schools in the Netherlands. While the legal provision still enabled the possibility to organize functional supervision in a one-tier board, most schools chose a two-tier construction with a separate supervisory board. The regulations within this law, the ‘Good Education and Good Governance Act’ (*Wet goed onderwijs en goed bestuur*), resemble much of the earlier corporate governance reforms, since the act primarily focuses on creating independent supervision by non-executive directors to balance power in educational institutions (Nolen & Huisman, 2010).

These formal administrative reorganisations of education began in the early 1990s when the Minister of Education requested an advice from the Education Council (*Onderwijsraad*). This advice outlines two principles for good educational governance: first, a balance between the vertical accountability of educational organisations to the Ministry and the Educational Inspectorate and the horizontal accountability to students, parents and other stakeholders; and second, a functional separation of executive power and supervision (Klifman, 2010b).

Contrary to the first principle, the principle of separation of executive power and supervision was a standard component in all following policy documents, letters and legislative proposals from the Ministry of Education (Klifman, 2010b). The supervisory board seemed to have become the panacea for all problems of governance in education. Horizontal accountability thus became framed as a specific task for the internal supervisors, though in practice most non-executives have very limited contact with stakeholders and gather their information from the chief executive director only.

The Law on Good Education and Good Governance (2010) made the functional separation of management and supervision in primary and secondary schools compulsory, but it did not prescribe a supervisory board, because that was considered inconsistent with the practice and desire of 'a colourful, multiple and dynamic' educational system (OCW, 2005: 4). There are indeed major differences between schools in orientation, size and legal form. Since the school struggles were pacified in 1917, the Dutch constitution stipulates freedom of education, which means that, within certain limits, anyone can open a school and receive public funding.

Two-thirds of the almost 8,000 schools in the Netherlands are such publicly funded semi-private schools with a religious or educational affiliation. Some are large organisations composed of thirty or more schools, but the majority of institutions govern just one or two schools. Educational organisations also differ in their legal categorization; most are foundations, some associations and a few are still municipally governed. Despite these differences and the so-called colourfulness, the vast majority of educational institutions chose to create a two-tier structure with a separate supervisory board (Blokdijk & Goodijk, 2012).

The supervisory board in educational organisations generally consists of five or seven members with different areas of expertise (such as financial, legal and education expertise). These members are recruited by the supervisory school board itself through an open application procedure. The board of executive directors of educational organisations often consists of only one person: the school leader who acts as the chairman of the board of directors (*voorzitter van het college van bestuur*), comparable to the chief executive officer (CEO) in the corporate sector. Unlike practices seen for example in the United States, supervisory boards in educational organisations in the Netherlands are not elected democratically and are therefore perceived as less political and as largely independent.

Not all educational institutions awaited the legal provision for the adaption of the supervisory board model in 2010. Larger institutions went ahead and created supervisory boards in basic education as early as the mid-nineties. Interestingly, the biggest governance failures occurred among these early adaptors, such as Amarantis. The chair of the supervisory board of Amarantis at the time even co-designed the governance code for the sector. Apparently, institutions most advanced and experienced in the use of the corporate model of governance were at the same time the ones where this model failed the most.

The overwhelming choice for the supervisory board-model in education seems particularly inspired by the corporate governance model. However, this institutional isomorphism on the Rhineland two-tier model of corporate governance is accompanied by the repetitive note that the governance of education is substantially different from the management of a firm (Strikwerda, 2005). What these differences are and what the consequences of these differences are for the effectiveness of supervisory boards in educational institutions remain largely unanswered questions. When supervisory boards in educational organisations are thus modelled after the supervisory boards in the corporate world, it will be intriguing to explore what we know regarding the effectiveness of corporate boards of directors from the corporate governance literature.

The board in corporate governance

The study of corporate governance conventionally begins with Berle and Means' now classic book *The Modern Corporation and Private Property* (1932). Admittedly, a discussion surrounding the desirable design of corporate governance was ongoing preceding their work (Gomez, 2004; Wells, 2009). Berle and Means, though, presented an empirically based analysis of the separation of ownership and control in the modern American corporation. In their view, ownership and control within the corporation were, respectively, centrifugal and centripetal forces. This made that ownership and control became separated. The first became dispersed among the various shareholders and the latter came into the hands of professional managers (Berle & Means, 1932).

Corporate governance is therefore generally defined as the structures and institutions designed to coerce managers to act in the best interests of shareholders (Bebchuk & Weisbach, 2010; Donaldson, 2012; Wells, 2009). Davis criticizes this single-minded focus on financial markets in corporate governance: “The institutions of corporate governance could thus be seen as a sort of financial global positioning system, a set of devices that mesh to guide corporate executives toward the North Star of shareholder value” (Davis, 2005: 145).

Gomez (2004) highlights that this emphasis on shareholder value is ideologically rather than academically motivated. Moreover, the shareholder interpretation of corporate governance dating from the 1930s now seems somewhat outdated, as Gomez argues: “Full understanding of corporate governance institutions, such as the board of directors, cannot be separated from an understanding of the underlying theories that serve to explain and legitimize ‘good’ corporate governance in each period of time” (Gomez, 2004: 38).

It therefore seems useful defining corporate governance as the steering mechanisms by which corporations are managed and controlled in order to create value for all stakeholders (Huse, 2007; L'Huillier, 2014). One of the main steering mechanisms to reduce the divergence between the interests of managers and stakeholders is the creation of independent internal supervision, either in a one-tier model in which non-executive directors serve on the board of directors or in a two-tier model featuring a supervisory board alongside the board of directors (Daily, Dalton, & Cannella Jr, 2003; Hooghiemstra & van Manen, 2004; Johanson & Østergren, 2010).

The notorious accounting scandals at the beginning of the twenty-first century (Enron, WorldCom, Ahold, etc.) and the 2008 financial crisis resulted in greater attention, both in research and society, for effective board performance in corporations. Research on the effectiveness of boards of directors mostly aims at establishing a relation between structural and formal characteristics of boards, such as the size or composition, and the organisational performance. Moreover, the societal interest in corporate governance seems primarily focused on the formal and structural features of corporate boards, calling for separation of CEO-chair duality, increase of outside directors and more diversity within boards.

Unfortunately, the findings of research on such structural and formal board characteristics are not encouraging. Daily, Dalton and Cannela, for instance, state: "we now know where not to look for relationships attendant with corporate governance structures and mechanisms, perhaps even more so than we know where to look for such relationships" (2003: 371). These functionalist studies of board structures are informed by agency theory. Agency theory is the most dominant theory in corporate governance research on the effect of boards on firm performance (L'Huillier, 2014).

At the heart of agency theory lays the separation between management and ownership (shareholders) in firms and the subsequent conflict of interest between the management of a corporation as agent and business owners as principal (Fama & Jensen, 1983; Jensen & Meckling, 1976). Many agency research focuses on the board as the locus of governance mechanisms through which the interests of managers are aligned with those of the shareholders (Eisenhardt, 1989). The presence of sufficient nonexecutive or outside directors on a board, for instance, is a much studied mechanism that would reduce agency costs because non-executives or outsiders are considered to be more effective in their monitoring of management on behalf of the principals (Fama & Jensen, 1983).

The flaws of agency theory on boards

While agency theory focuses on the problem and cost of ownership and control in firms, the most relevant difference between nonprofit or public organisations, such as schools, and firms might be the complexity of their ownership structure. The question of the ownership of schools is troublesome and can be answered from different perspectives. The presence of multiple principals with different goals and conflicting interests limits the applicability of agency theory to nonprofit and public organisations – for agency theory frames a question of power and influence as a technical problem of fine-tuning functions. At the same time, – taking into account the corporate scandals at the beginning of the 21st century – it is highly questionable whether functionalist theories such as agency theory are even applicable in firms where ownership is not as monolithic as theory would suggest.

There are, in effect, three primary concerns regarding approaching boards of directors from an agency perspective. First, agency theory often limits itself to the monitoring role of boards of directors, while the role of the board director is wider and more complex (Machold & Farquhar, 2013; Stiles & Taylor, 2001). Boards, for instance, also have a role in advising management and in connecting executives with the surrounding environments. This is particularly true even for schools where boards have a responsibility in the horizontal accountability.

Second, the traditional agency approach to boards is biased towards the selfish individual as a rational actor rather than boards as decision-making groups with a limited rationality (Bainbridge, 2002; Van Ees, Gabrielsson, & Huse, 2009). We have come to recognize that people don't act with complete rationality and - fortunately - not solely out of informed self-interest. Boards are comprised of people who interact with each other and arrive at joint decisions using their own mindsets and values.

Third, critics point to the gap in the underlying causal mechanism that makes an unexplained leap from board characteristics as input to corporate performance as output (Forbes & Milliken, 1999; Pettigrew, 1992). There are quite a few steps between, for example, the number of non-executive directors on a board and a firm's annual profits or between students' exam scores and the size of a supervisory board in an educational institution.

Alternative theories on boards

As a reaction and extension to agency theory, stewardship theory developed in the early 1990s. Therein, managers are viewed not as untrustworthy and selfish, but as good and trustworthy stewards focused on the corporate interest (Davis, Schoorman, & Donaldson, 1997; Donaldson, 1990). Stewardship theory emphasizes the cooperative and advisory roles of boards rather than the monitoring role.

Unlike the economically focused agency theory, stewardship theory draws primarily from sociology and psychology to develop an alternative model in which the relationship between owner and management, between principal and agent, is viewed as an implicit social contract that entails a sense of mutual accountability (Hernandez, 2012; Letza, Sun, & Kirkbride, 2004). Contrary to agency theory, researchers from stewardship theory therefore expect a better corporate performance when there is a high percentage of insiders on the board, as insiders are better informed and more motivated and thus better able to fulfil an advisory role. However, this assumption also ultimately lacks empirical support (Davis, Schoorman, & Donaldson, 1997).

A third frequently adopted theory in research on boards is the resource dependency theory. In this theory, governance is seen primarily as a link between the corporation and the resources needed to maximize corporate performance. The board is thereby perceived as a network tool for dealing with the corporate environment (Pfeffer, 1972). Resource dependency theory considers the corporation as an open system, depending on its external environment. As such, it also acknowledges the influence of external factors on such organisations, where managers aim to reduce uncertainty and dependence on those factors (Hillman, Withers, & Collins, 2009).

At the same time, however, resource-dependency theory also remains primarily concerned with the formal characteristics of boards. Based on the understanding from resource dependence theory that the composition of a board must provide the resources a firm requires at a particular time, considerable research into board interlocks and the knowledge and experience directors bring to the table has been conducted.

In agency theory the non-executive directors and supervisory boards were primarily envisioned as a controlling body, acting on behalf of the shareholders. Based on easily accessible descriptive data of the board as an input variable and the financial results as output, researchers tried to formulate statements about the effectiveness of control (Finkelstein & Mooney, 2003). Results from this stream of research are poor and contradictory (Dalton, & Dalton, 2005; Dalton, Daily, Ellstrand, & Johnson, 1998; McNulty, 2013). And even though stewardship theory and resource dependency theory have both complemented agency theory in some important respects, both these functional approaches still view the board as a group of individuals whose personal characteristics matter less than the functional design of the board as a 'professional business arrangement' (L'Huillier, 2014: 312).

However, as many theorists and researchers do recognize that the explanatory value of each of the three theories is limited, they advocate multi-theoretical approaches to boards and corporate performance (Finegold, Benson, & Hecht, 2007; Hillman & Dalziel, 2003; Lynall, Golden, & Hillman, 2003; Sundaramurthy & Lewis, 2003). Moreover, the focus of research has shifted from the structural aspects of governance, such as the percentage of outside directors within the board, to an exploration of the importance of context, behaviour and evolution (Daily, Dalton, & Cannella Jr, 2003; Gabrielsson & Huse, 2004; Hambrick, Werder, & Zajac, 2008; Huse, Hoskisson, Zattoni, & Viganò, 2011).

Governance is thus above all behaviour. The central research question of this dissertation therefore is the question what behavioural elements are important for the effectiveness of supervisory boards in educational institutions?

Towards a behavioural theory on boards of directors

Both in academic literature and in practice there is an increasing awareness that good governance, in private firms as well as in nonprofit organisations, is not a functional matter of technicalities – such as codes, rules and frameworks for good governance – but a question of behaviour (Forbes & Milliken, 1999; Huse, 2005; McNulty, 2013; Pye & Pettigrew, 2005; Van Ees, Gabrielsson, & Huse, 2009). An alternative approach to corporate governance focuses on these internal dynamics and behaviour of supervisory or non-executive board directors (McNulty, 2013). Several studies in different countries and in different sectors have shown that behavioural indicators indeed have greater explanatory power than the formal functionalist characteristics such as size and composition.

However, despite the much echoed call for a process-oriented approach to board effectiveness, the behavioural study of corporate governance lacks a shared theoretical framework, making it difficult to connect the various studies and models with one another. Thus, findings are scattered throughout disciplines and across theoretical backgrounds. The study of board processes threatens to become a catch-all term for research that is not based on agency theory: "'board process study' sometimes appears to be used simply to describe work that cannot be pigeonholed with any other more established label, rather than identifying work that shares guiding assumptions" (Pye & Pettigrew, 2005: S34).

This dissertation seeks to advance research on boards of directors by developing a researchable theoretical framework of the behavioural determinants of the effectiveness of boards in general and supervisory boards of education organisations in particular. Thus making the question which framework could be used to explore behaviour and effectiveness of supervisory boards the first subquestion of this research.

Drawing on Roberts, McNulty and Stiles' (2005) insistence on accountability as key to understanding the role of supervisory directors within corporate governance, Huse (2005) developed a framework to examine the behaviour of boards. Huse regards creating accountability as the primary objective of boards. To Huse, accountability is that a board acts in the best interests of the corporation and the various stakeholders: "Accountability and board task expectations are results of the interactions between internal actors, external actors and the board members" (Huse, 2007: 36). Huse's model addresses the previously discussed concerns regarding research from an agency perspective.

First, Huse takes a pluralistic approach to the theory of the tasks of boards, in which the task of boards is more than just financial control. Second, the model breaks down the relationship between the composition of a board and corporate performance into smaller intermediate steps. Third, it utilizes theories from cognitive and social psychology to get a handle on the decision-making culture within boards. And finally, in line with resource dependency theory Huse's model approaches boards as an open system interacting with various internal and external actors (Huse, 2005).

Most crucial within Huse's model is the relationship between the decision-making culture, or social processes, within a board and the task performance by a board. To understand the relationship between these two, it is necessary to first clarify what the tasks and roles of a board within a corporation actually are. Little consensus exists within corporate governance research on what the roles of the board should be (Adams, Hermalin, & Weisbach, 2010; Nicholson & Newton, 2006; Petrovic, 2008).

Tasks of the board of directors

How one views the tasks and roles of the board depends heavily on one's own theoretical perspective (Van den Berghe & Levrau, 2004; Zahra & Pearce, 1989). Accordingly, classifications vary in designations, numbers and nuances. Although some studies distinguish six different roles of directors (Van den Berghe & Levrau, 2004), the most common classification is still that of two roles: service and control (Minichilli, Zattoni, & Zona, 2009). Another commonly used classification distinguishes three roles of directors, control, advice and network (Nicholson & Kiel, 2004). Stiles and Taylor (2001), in their extensive research on the role perceptions of non-executive board members, also arrive at a threefold classification. According to them, non-executive board members have strategic, controlling and institutional roles.

Huse's model aims to unify the various classifications through approaching the two tasks of a board: service and control from three different perspectives: an internal, external and strategic focus (Huse, 2005; Minichilli, Zattoni, & Zona, 2009). In Huse's model the decision-making culture is the most import driver for the task performance of boards of directors. That requires a conceptual model for an effective decision-making culture in boards of directors. Such a model can, as an answer to the first subquestion, be found in Forbes and Milliken's key theoretical paper from 1999.

Boards as decion-making groups

The concise and researchable model presented by Forbes and Milliken (1999) has been one of the most promising avenues in the behavioural study of boards of directors (McNulty, 2013). Their model and the research building upon it demonstrate how a boards of directors are not loose individuals, but rather are a group that works collaboratively, as a team. Forbes and Milliken see boards as "large, elite and episodic decision-making groups that face complex, multifaceted tasks that involve strategic-issue processing" (1999: 492) and, since boards are not involved in implementation their output is entirely cognitive.

They integrate literature on team performance in corporate governance and formulate three behavioural antecedents of effective board behaviour: cognitive conflict, effort norms and the use of knowledge and skills. Effort norms are useful for ensuring preparation, participation and analysis. Cognitive conflict contributes to the leveraging of differences in perspective. The use of knowledge and skills refers to the ability to make use of the resources within the board while performing its tasks. The results of research on board effectiveness following the Forbes and Milliken-model are not consistent: they vary depending on context and operationalisation.

An important first step, therefore, is to identify and organize the results from previous research that has been conducted on the basis of hypotheses in Forbes and Milliken (1999). These subquestions regarding the insights and findings from past research on boards of directors based on Forbes and Milliken's model are addressed in Chapter 2.

Assessing board effectiveness

The main assumption underlying research on boards is that good governance matters. (Forbes & Milliken, 1999; Huse, 2005)This also prompts the question as to how exactly the effectiveness of a supervisory board should be perceived. In the management literature, effectiveness is often described as 'doing the right things' (Drucker, 2018). The nice part of this description is that it moves from theoretical models of what boards should do, to what they actually do. Yet the question remains for whom those things are the right things. Huse points out in his book on value creating boards how the answer to that question hinges on the question of the effectiveness of boards: 'focussing on bottom-line results may not be […] a criterion of performance from the point of view of every stakeholder group' (Huse, 2007: 14).

For supervisory boards in education the 'bottom-line results' might be less contested. Ultimately, good governance should lead to good educational results. Like the name of the 2010 legislation emphasizes: Law on Good Education and Good Governance. However, there are quite a few causal steps between good governance and good educational results. I therefore use 'board task performance' as an intermediate variable between board behavioural processes and organisational performance, in line with Huse's (2005) model as outlined previously. These intermediate steps make the impact of good governance on the quality of education visible only after some time. While board behaviour might impact board task performance directly, the effect of changes in board task performance on the organisational performance will take more time.

In addition, data on the educational results are often available only after a year or longer. Both theoretical, given the different and sometimes unknown intervening variables, as well as practical, given the time that takes place between changes in board behaviour and the publication of educational results, it is difficult to form a judgment on the relationship between good governance and organisational performance. Supervisory boards in educational organisations themselves, however, believe that they have an impact on school performance (Hooge & Honingh, 2014).

The difficulty in assessing the impact of boards on performance can be illustrated by the fact that even the external control of education, the inspectorate of education, does not know whether there is a relationship between the quality of supervision and educational performance of schools (Ehren & Visscher, 2008; Hofer, Holzberger, & Reiss, 2020). Research in this field is difficult, because often no use can be made of experimental or quasi-experimental designs. Furthermore, the data studied are usually limited to self-reported improvement activities and behavioural changes of teachers and school leaders (Janssens & de Wolf, 2007).

If we are indeed unable to establish an effect on the educational performance of the external monitoring, then measuring the effect of the internal monitor seems even more unfeasible. The research that has been attempted is limited in scope and methodologically not very sound. Hofman and others (2012), for instance, included a small group of boards in which large schools were overrepresented. Since larger schools tend to be ahead in implementing governance reforms and are known to have, on average, a higher educational performance, the partial effects found may be due to sampling bias (Onderwijsraad, 2013). Especially because they did find partial effects of board structures and procedures on educational outcomes, but no significant effect of all board aspects on school performance. They attribute this lack of effect to the small number of boards included, which was a maximum of 40 (Hofman, Van Leer, De Boom, & Hofman, 2012: 33) This small sample raises questions on the generalizability of their findings.

Even if a school performs well - regardless of how well and reliably that performance might be measured - it does not necessarily imply that the executive or supervisory board also functions well. Pugliese and others (2014) even seem to find an inverse relationship in the corporate setting: non-executive board members invest less in the quality of their own performance when the company is doing well. Because of this inverse relationship and the gap in time and causality, this dissertation measures the effectiveness of supervisory boards not in terms of educational outcomes, but in terms of the quality of the supervisory board's task performance. Following the suggestions of Huse (2005) and Forbes and Milliken (1999) and in line with the previous research reviewed in Chapter 2. Board task performance is expected to differ in the control and in the advisory task of boards, where the control task refers to the monitoring of the behaviour, output and strategy of executives, and the advisory task refers to the advice, counsel, networking and strategic participation offered to the executives (Forbes & Milliken, 1999; Huse, 2005).

A model for effective supervisory board behaviour

Most of the concepts in this research project originated within studies on team effectiveness and were adjusted to the specific context of supervisory boards in educational organisations. Boards are not only groups but also teams, as they not only possess al the characteristics of groups, such as interaction and interdependence, but are also engaged in a collective pursuit of goals, which is considered to be the *sine qua non* for teams (Forsyth, 2010: 353). Supervisory boards are nevertheless a special kind of team: their output is purely cognitive and they only meet a few times a year, which leaves them, compared to teams that meet regularly, with few opportunities to resolve disagreements.

As Forsyth (2010) argues, a functional approach to teams starts with the simple question of what effective teams look like when they execute their tasks. The answer to this question should take into account that teams are complex systems and provide a thorough analysis of the patterns of interaction within teams, searching for the processes that cause such complexity (Forsyth, 2010). What then makes supervisory board effective? Hackman and Wageman (2004, 2005) determine three processual factors that contribute to the effectiveness of teams: the level of effort expended by the team members collectively; the performance strategies used and the knowledge and skill the team members contribute to their tasks. “Any team that expends sufficient effort on its work, deploys a performance strategy that is well-aligned with task requirements, and brings ample talent to bear on the work is quite likely to perform well" (Hackman & Wageman, 2004: 41).

Apart from the performance strategies, these team processes align with the elements of the model of board performance presented by Forbes and Milliken (1999). In the context of boards, applying a task-appropriate performance strategy closely resembles the control and advisory performance of boards. Forbes and Milliken added conflict to processes relevant for board performance, which, given the cognitive tasks of boards, seems a valid contribution to the model of board effectiveness. Though the meta-analyses in Chapter 2 indicate that in the research based on Forbes and Milliken's model, the findings on conflict in particular are not univocal. The effect of effort norms and the use of knowledge and skills are found to be significant across various contexts in the meta-analyses of Chapter 2.

Following Hackman & Wageman (2004) and Forbes and Milliken (1999), Chapter 3 answers the subquestion wether these behavioural indicators are also positively related to the task performance of supervisory boards in educational organisations in the Netherlands. At the same time, Chapter 3 seeks to answer the questions raised in Chapter 2 on the specific impact of conflict in the context of supervisory boards of educational organisations since the results in Chapter 2 revealed the impact of conflict on board effectiveness to be much more complex and multifaceted than expected.

Informed by the team effectiveness research, conflicts are therefore not conceived as one-dimensional but as being multi-dimensional and behavioural indicators presumed to be associated with the relationship between conflict and effectiveness are also included, such as conflict management, cohesion and participative leadership. Chapter 4 and 5 then answer the subquestion how conflict dimensions, perfomance and these intermediate factors are related over time.

Model of conflict and supervisory board effectiveness

In his classic study of conflict, Boulding (1962) identified four general features of conflict: the party, the behavioural space, competition and disagreement. In line with this, conflict is generally defined in behavioural sciences as a period of interaction of at least two parties in which there are perceived incompatibilities (De Wit, Greer, & Jehn, 2012; Jehn, 1995). Initially, intragroup conflict was seen primarily as a threat to team effectiveness (De Dreu & Weingart, 2003; Hackman & Morris, 1975). Conflict, due to the inherent tensions and antagonisms, was said to disrupt a team's performance and satisfaction and to distract team members from the effective performance of their tasks (Heemskerk, Heemskerk, & Wats, 2017).

Later on, the positive aspects of conflict for a team’s performance became more widely recognised (De Dreu & Weingart, 2003; Forbes & Milliken, 1999; Jehn, 1997). Conflict confronts teams with the underlying issues and obliges teams to examine problems from multiple perspectives. However, the question whether conflict has a positive or negative impact on the functioning of a team appeared to be a complicated issue to answer. Different meta-analyses paint a mixed picture as in some of the studies conflict contributes to the effectiveness of a team while in others it poses a threat to the functioning of a team (De Dreu & Weingart, 2003; De Dreu, 2008; De Wit, Greer, & Jehn, 2012; O'Neill, Allen, & Hastings, 2013; Tjosvold, 2008).

Building on Forbes and Milliken's (1999) framework, a model was developed based on the meta-analysis to explore the behavioural aspects and, in particular, the workings of conflict for the effectiveness of supervisory boards. Figure 1 presents a simplified version of this model also indicating which chapter focuses on which components of the model. Below follows an overview of the behavioural indicators of supervisory board effectiveness as explored in this dissertation in more detail.

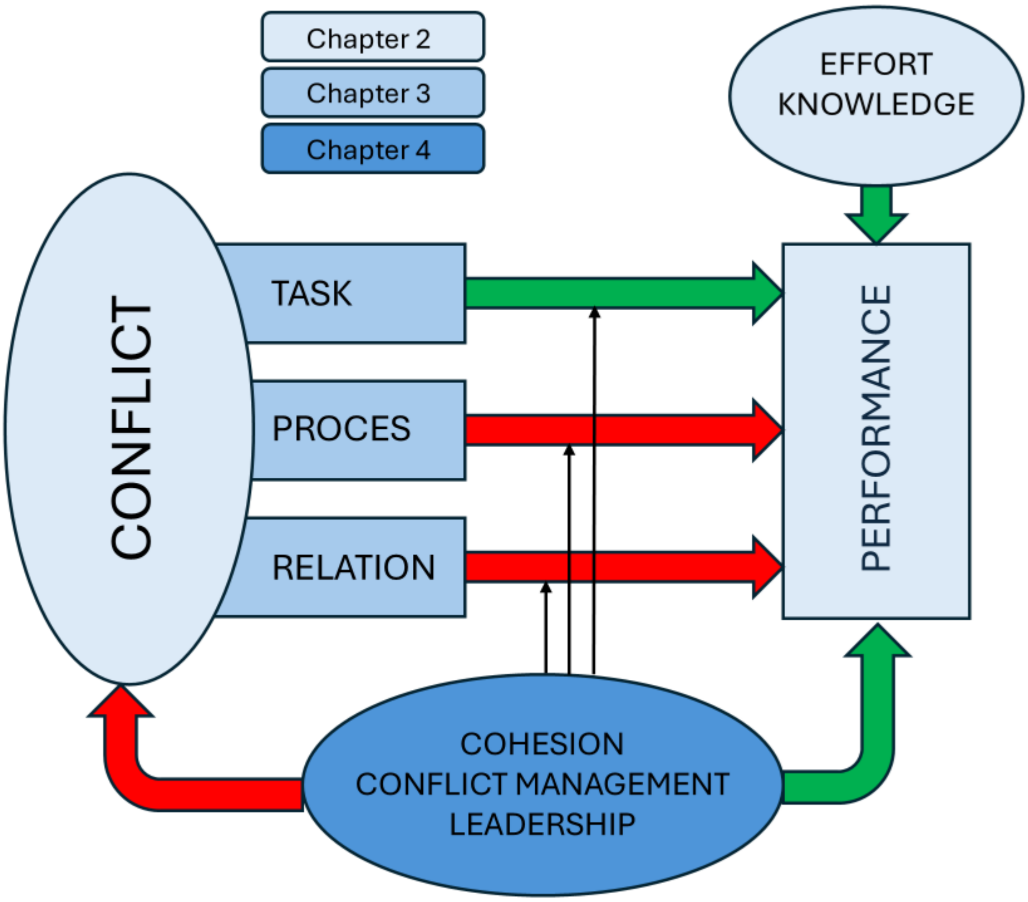

Figure 1. Simplified theoretical model of conflict and supervisory board effectiveness as explored in Chapters 2, 3 and 4.

Effort Norms are socially constructed expectations of the amount of time and energy individual group members are supposed to invest in their duties (Forbes & Milliken, 1999; Heemskerk, Heemskerk, & Watts, 2015). Boards use these informal rules to regulate the behaviour of board members in order to avoid free-rider behaviour (Bailey & Peck, 2011). Shared norms regarding the effort of team members are generally considered to have a positive impact on the quality of team task performance (Hackman & Wageman, 2004; Hoegl & Gemuenden, 2001). When supervisory board members accept that too little time is invested in analysing and collecting the necessary information, the chance is greater that they become a passive rubber-stamp to the executive management (Stiles & Taylor, 2001). A board where clear standards exist of the effort that is expected of its members will effectively fulfil both its supervisory and its advisory task (Forbes & Milliken, 1999). The frequency of meetings is not an equivalent of the level of effort. Boards that invest similar amounts of time in meeting with one another can still differ in their levels of effort. Research based on the model of Forbes and Milliken (1999) almost never leaves out Effort Norms as an antecedent of effective board task performance, but the operationalisation does differ slightly between studies. Most studies use Likert-scale items on participation in and preparation of board meetings making use of Forbes and Milliken's suggestions based on the items in Wageman (1995). Other studies combine these items with more traditional proxies such as the length and frequency of board meetings (e.g. McNulty, Florackis, & Ormrod, 2013; Wan & Ong, 2005). In this dissertation, meeting frequency is regarded as an input-level factor rather than a process-level factor and is used as control variable in Chapter 3 and 4.

The use of Knowledge and Skills. Boards are in need of a high degree of specialized knowledge and skills to effectively fulfil their tasks. A lot of research, however, only focuses on the input-level factor of presence of knowledge and experience within a board. However, the presence of knowledge alone does not necessarily make a board effective. Knowledge and skills need to be used effectively in order to increase the quality of decision-making as a group. Forbes and Milliken (1999) therefore explicitly argue that the presence of knowledge and skills in a group does not guarantee the actual use of that knowledge and skill. They introduce The use of Knowledge and Skills as a board process variable. The use of Knowledge and Skills describes the extent to which a board is able to put the available knowledge and skills to use in the fulfilment of its tasks. This calls for respect and knowledge of each other's expertise within a board.

Intragroup Conflict. The question whether conflicts contribute to the effectiveness of an organisation is a much-debated issue among scholars in psychology and organisational behaviour. Until the 1990s, conflict was mainly considered as negative for the effectiveness of an organisation. Conflicts were found to decrease satisfaction of individual group members, decrease group productivity and hinder the exchange of information needed for effective decision-making (Jehn & Bendersky, 2003). To clarify the effect of conflicts within boards it is crucial to recognize the multidimensionality of the concept. The history of the conflict classification as sketched by Jehn (2014) shows a tendency to a tripartite distinction between task conflicts, process conflicts and relationship conflicts. Task conflicts are focused on the content of the task at hand, process conflicts are focused on how tasks should be accomplished, and relationship conflicts are driven by interpersonal incompatibilities entailing tension, animosity and annoyance among team members (Jehn, 1995, 1997).

Intragroup Task Conflict is regarded as crucial for improving the quality of decision-making in common-goal teams. Jehn (1995) found that task conflicts increased team performance and Amason (1996) showed that constructive conflict was positively linked to decision-quality in Top Management Teams. It is therefore not surprising that Forbes and Milliken (1999) included task conflicts as one of the three board processes in their model of the decision-making process within boards. However, this view of task conflict as having a clearly positive effect on group performance began to shift when De Dreu and Weingart (2003) published their meta-analysis, in which the results of 30 studies on conflict and performance were included. Their results showed no difference between relationship conflict and task conflict: both correlated negatively with team performance. However, in their conclusion they leave some room for the possibility of positive effects of conflicts “under very specific circumstances” (De Dreu & Weingart, 2003: 748). In the 2000s, organisational scholars searched for these specific circumstances in which task conflicts could have a positive impact on the performance of a group. Two meta-analyses of the conflict-performance literature provide a more complex and detailed understanding of the relationship between conflict and group performance and identified two conditions in which task conflicts have a more positive effect on team performance (De Wit, Greer, & Jehn, 2012; O'Neill, Allen, & Hastings, 2013). First, task conflicts tend to be more positive in strategic and complex decision-making and more negative in routine tasks (O'Neill, Allen, & Hastings, 2013). Second, the effects of task conflicts are less negative or even more positive in teams functioning higher in the organisational hierarchy (De Wit, Greer, & Jehn, 2012). Since boards are typically involved in non-routine and complex decision-making at the apex of the organisational hierarchy, intragroup task conflicts is expected to enhance the performance of boards.

Intragroup Relationship Conflict on the other hand results in low cohesion and is likely to hamper the effectiveness of the group (Jehn, 1995). Westphal and Bednar (2005), for instance, have found that low cohesion between non-executive directors contributed to a failure in communicating their concerns about the organisations' strategy. Relationship conflicts can be triggered by task conflicts. Task conflicts are found to have a less negative or even positive effect on group outcomes when they are weakly correlated with relationship conflicts (De Wit, Greer, & Jehn, 2012). This is consistent with a frequently suggested explanation for the negative aspects of task conflict, in which task conflict functions as a trigger for relationship conflicts (De Dreu & Weingart, 2003; Mooney, Holahan, & Amason, 2007; Simons & Peterson, 2000). Task conflicts can have a positive effect on the performance of a team when these conflicts are prevented from escalating to relationship conflicts. The 'triggering-effect' of task conflict on relationship conflict seems to be mediated by the cohesion within a group as suggested by Ensley, Pearson and Amason (2002). They argue that groups with a high degree of cohesion are better able to prevent task conflicts from escalating into relationship conflicts. Forbes and Milliken included cognitive conflict in their model but left out relationship conflicts. Studies following their model likewise mostly paid attention only to the task conflicts within boards (an exception is e.g. Wan & Ong, 2005). This might partially explain the inconsistent findings on the effect of task conflicts in behavioural studies of board effectiveness as reported in Chapter 2.

Intragroup Process Conflict is differences of opinion on how to perform a task (Jehn, 1997). Process conflicts generally have a negative effect on the effectiveness of teams, because members of the group are steered away from the performance of their duties. Task conflict and process conflict admittedly are interrelated (Greer, Jehn, & Mannix, 2008), but both conceptually and empirically so different that it is important to include process conflicts as a distinct dimension in the behavioural study of boards (Kerwin, Doherty, & Harman, 2011). Process conflict within a board has a place as internally focused conflict, that is, conflict about the organisation of the board itself (Who is in which committee? How do we evaluate ourselves? What does the resignation schedule look like?). These process conflicts are related to task conflicts, as conflicts over the content and execution of tasks are often intertwined. Process conflicts are also related to relationship conflicts. A debate within a board on the resignation schedule might arise due to, or alternatively give rise to, relationship conflict because this debate can be a processual opportunity to get rid of rivalling personalities or it can spur on negative emotions when one feels that the rotation schedule is misused in this way.

Board-CEO Conflicts form a distinct dimension of conflicts within supervisory boards. Especially in the educational sector where executive boards of directors are often one-man boards. As with intragroup conflicts, Board-CEO conflicts can also be distinguished into three dimensions: Board-CEO task conflicts, Board-CEO relationship conflicts and Board-CEO process conflicts. Board-CEO task conflicts are essential for a board's effectiveness, as it is a board's task to control and advise the CEO by challenging and judging his or her assumptions and strategic choices. Relationship conflicts between a board and the executives are likely to have a negative effect on board effectiveness, as it will probably cause the CEO to be less inclined to seek advice from his board.

Conflict Management. Conflicts are inevitable in teams and certainly in boards and thus require appropriate management to minimize negative impacts and to promote more positive effects. Conflict management has a positive effect on the cohesion within a team and it moderates the negative relation between conflict and cohesion (Tekleab, Quigley, & Tesluk, 2009). Teams and team members differ in their conflict management styles (Rahim 1983). Conflict management styles of a team refer to behavioural preferences in dealing with conflicts that form a pattern of actions and reactions trough which conflicts are handled. Teams that use integrative conflict management styles rather than confrontational or avoidance styles make more effective decisions (Kuhn & Poole, 2000). Due to possible triggering of relationship conflict by task conflict and the negative effect of relationship conflicts, most boards tend to avoid conflict. But, although relationship conflict has a negative effect on the performance of a board, the absence or avoidance of relationship conflict can be even more detrimental. As Eisenhardt, Kahwajy and Bourgeois put it: “The absence of conflict is not harmony, it’s apathy” (1997: 77). Avoidance of conflict negatively impacts board performance and may lead to ‘cognitive blindness,’ as it not only prevents dysfunctional relationship conflict but also hinders the necessary exchange of viewpoints and arguments in task conflicts.

Cohesion is commonly defined as the tendency of a group to be one and united in the pursuit of its goals (Mach, Dolan, & Tzafrir, 2010; Heemskerk, Heemskerk, & Wats, 2015). Cohesion improves participation and communication within a group and also increases the acceptance of the goals, tasks and roles among group members (Casey-Campbell & Martens, 2009). However, Forbes and Milliken (1999) do not assume a linear positive correlation, but an inverted U-shaped relationship between cohesion and board effectiveness. Since, although insufficient cohesion is negative to task performance, too much cohesion might cause groupthink within a board. Groupthink develops when members feel so deeply involved with a group that in their wish for unanimity, they lose their ability to reasonably view alternative decisions (Janis, 1982; Heemskerk, Heemskerk, & Wats, 2015). The relationship between cohesion and performance is, in reality, much more complex, and although groupthink is a serious threat to boards, cohesion in itself is never the sole cause of groupthink (Mullen, Anthony, Salas, & Driskell, 1994). The emergence of groupthink also depends on the source of the cohesion within a team. If the cohesiveness of a team is grounded in their joint commitment to their task instead of on their interpersonal relationship, which is often the case in boards, groupthink is less likely to occur (Bernthal & Insko, 1993). To disentangle the reciprocal effects between cohesion, conflicts, conflict management and performance board processes, performance and cohesion will be measured at multiple times, this will allow to reveal the underlying causal mechanisms or at least the correlations between them.

Participative leadership. The board chair plays an important role in creating an environment in which a board through participative decision-making can be effective in its performance (Banerjee, Nordqvist, & Hellerstedt, 2020). As principal F in The UK Corporate Governance Code requires the chair of the board to 'promote a culture of openness and debate' and to facilitate 'constructive board relations and the effective contribution of all non-executive directors' (Financial Reporting Council, 2018: 6). Participative leadership by the chair of the supervisory board contributes to the advancement of task conflict through constructive debate and since it invites all to participate it also strengthens the cohesion and is assumed to help preventing relationship conflicts.

Research method

One of the explanations for the overproduction of corporate governance research based on structural and formal features of boards is the accessibility of such archival material (Bednar & Westphal, 2006; Huse, 2005; Pettigrew, 1992). Obtaining data on the behaviour of a board is much more complex and time consuming (Van Ees, Gabrielsson, & Huse, 2009). Access to the black box of the boardroom is therefore, according to many, the most important challenge for process-oriented research on boards (Leblanc & Schwartz, 2007). But the access to boards and directors is not the only challenge for process-oriented research: it is also less simple to quantify social processes than to count the number of non-executive directors in the board. "[I]t is difficult to observe differences in behaviour and harder still to quantify them in a way useful for statistical study" (Adams, Hermalin, & Weisbach, 2010: 59).

In this study therefore a survey was designed with several Likert scale items on the behaviour of the board as a team providing both access to the school boardroom as well as quantifiable data on the social processes within boards. The survey was developed in consultation with the Dutch association of supervisory boards in education (VTOI-NVTK) and was pre-tested by cognitive interviewing a sample of 10 experts, such as board secretaries, members of supervisory boards, educational executives and scholars specialized in educational governance (Willis, 2004). The pre-tests served to tighten up the items and to render them more unequivocal. For instance, the formally accurate term 'het interne toezicht' (the internal supervision) has been replaced by the more commonly used term 'de raad van toezicht' (the supervisory board) in alle items.

The survey was distributed in 2016, 2017 and 2018 among all educational organisations with membership of the VTOI-NVTK. This sample includes almost 500 organisations with differences in size and type of education from primary school to tertiary vocational education. Although (part of) the survey initially was also distributed to chairpersons of supervisory boards and chairpersons of joint representative councils as well, because of the low response rate from both, only the response from the executive directors of educational organisations has been used in this thesis.

The executive director of the educational organisations were invited to an online survey. To increase the response as well as to reduce potential for common method bias invitations were send through an personalized email emphasizing the anonymous and confidential processing of the data (Podsakoff, MacKenzie, Lee, & Podsakoff, 2003). Although Chapter 2 puts the risk of common method bias in perspective and does not find an effect of relying on a single respondent in research on board behaviour. The chief executive director within the organisation also knows the organisation well and is also more than other board members in the position to make statements on the functioning of the supervisory board as a whole (Minichilli, Zattoni, Nielsen, & Huse, 2012).

In 2016, after two rounds of reminders, 300 (60%) out of 498 directors responded. In 2017, after two rounds of reminders, 130 (26%) of the directors responded. 103 (21%) educational organisations completed the survey in both 2016 and 2017. In 2018, after two rounds of reminders 259 (52%) of the directors responded. For 73 (15%) educational organisations the director completed the survey in all three years.

Operationalisation of the variables in the survey items

The task performance of the supervisory board was operationalized through two variables: control task performance and service task performance. Control task performance was measured through six items questioning the controlling participation of the supervisory board on sector-relevant issues (e.g. educational quality) and two items inquiring to what extent the school board plays an active role as the employer of the executive director and to what extent they adequately monitor the performance of the executive director. The advisory task performance was measured by questioning the advisory participation on the same six issues and through three items inquiring to what extent supervisory boards in educational organisations use their networks to aid the executive director, act as a sparring partner and are an important advisor to the chair of the board of executive directors.

The behavioural variables describing the behaviour of the supervisory board, as mentioned above, were measured based on items inspired by the suggestions of Forbes and Milliken (1999), Wageman, Hackman and Lehman (2005), Sellevoll, Huse and Hansen (2007) and Bailey and Peck (2011). The items on conflict additionally make use of relevant items from the Intragroup Conflict Scale developed by Jehn (1995). Cohesion was gauged by combining relevant items from the Group Cohesion Scale Revised (Treadwell, Lavertue, Kumar, & Veeraraghavan, 2001) with items from the Group Environment Questionnaire (Carron, Widmeyer, & Brawley, 1985), and by adapting them to the context of supervisory boards in educational organisations. Board chair participative leadership was assessed items based on relevant participative decision-making-items in the Empowering Leadership Questionnaire (Arnold, Arad, Rhoades, & Drasgow, 2000).

All items in the survey were measured by means of a seven-point Likert scale. It is generally believed that the optimal number of categories on a Likert scale is between five and nine (Cox III, 1980). Statistical research on the categories on a Likert scale shows that, in theory, reliability does increase with the number of categories (Streiner & Norman, 2008). But respondents can usually only meaningfully distinguish seven categories (Miller, 1956). Moreover, the number of categories barely affects the characteristics of the data (Dawes, 2008). A seven-point scale was thus chosen in this research primarily due to the expectation that executive directors assessing their supervisory board might be hampered in this regard by end-aversion bias and might thus be less likely to use the outer two categories of the Likert scale (Streiner & Norman, 2008).

To test whether the various Likert scale items from which the variables were constructed had been sufficiently consistent, Cronbach's α was determined for these variables for all years separately. Given the exploratory nature of this research the values of α seem to confirm the internal consistency of the items in 2016. Based on the reliability analysis and an EFA on the survey results of 2016, three of the five initial items on intraboard and executive-board task conflict were excluded from the analysis, as they seemed to measure a concept more related to the shared cognition of the board as a team (e.g. Board members think and reason in similar ways) and seemed less related to the occurrence of task conflicts. Table 1 provides a concise overview of the variables and values of Cronbach's alpha for all years. A comprehensive overview of all survey items, as well as the items excluded based on the reliability analyses can be found in Appendix A.

Table 1. Overview of the variables and values of Cronbach's alpha for all years

Construct	Items	Alpha 2016	Alpha 2017	Alpha 2018
Effort	5	0,837	0,819	0,804
The use of knowledge & skills	3	0,894	0,873	0,853
Intragroup task conflict	2	0,828	0,824	0,788
Intragroup relationship conflict	4	0,898	0,921	0,906
Intragroup process conflict	3	0,698	0,450	0,439
Board-CEO task conflict	2	0,762	0,540	0,718
Board-CEO relationship conflict	2	0,848	0,908	0,883
Board-CEO process conflict	2	0,681	0,650	0,662
Conflict management	5	0,905	0,938	0,938
Board cohesion	6	0,878	0,840	0,856
Board Chair Participative Leadership	5	0,901	0,950	0,941
Control task performance	8	0,856	0,830	0,789
Advisory task performance	9	0,898	0,908	0,882

Note: The values of Cronbach's alpha are based on the included items. All items were measured on a seven point Likert scale.

At the end of the survey, a number of open-ended questions have been included in addition, asking about the key insights from the last (self-)evaluation of the supervisory board, the issues that have set the supervisory board's agenda over the past year and what the organisation's major challenges for the future are. Chapter 5 uses the answers to these survey questions for a qualitative deepening of the analyses.

Overview of the main results

Chapter 2 reveals through a meta-analysis how the empirical research conducted on the Forbes and Milliken model indicates that effort norms and the use of knowledge and skills do indeed contribute to a better performance of a board. However, the effect of task conflict on effectiveness is less unequivocal. Chapter 2 further highlights that methodological reservations raised against self-reporting surveys, concerning common method bias and relying on a single respondent alone are less of a concern than assumed. There does, however, seem to be a potential for further progress surrounding the defining and the operationalising of conflicts.

Chapter 3 corroborates, from an analysis of the responses from the 2016 survey, that the behaviour in a supervisory board has a greater explanatory value for its effectiveness than functional indicators such as executive tenure, supervisory board meeting frequency and executive board chair consultation. Especially, as was expected from Chapter 2, the effect of effort norms and the use of knowledge and skills on the task performance of supervisory boards was significant. Chapter 3 also demonstrates the extent to which conflict dimensions vary in their impact on supervisory boards' effectiveness, where conflict dimensions between the executive director and the supervisory board do not appear to be associated with the task performance of the supervisory board, except perhaps for a small negative effect of process conflict on the control task performance. The interaction effects with cohesion and participative leadership by the chair of the supervisory board indicate that the interplay of conflict, cohesion and effectiveness requires further research.

Chapter 4 combines the results of the 2016 survey with the 2017 survey to draw inferences about the relationship between conflict, cohesion and performance in supervisory boards from a more dynamic perspective. As such, it is unprecedented research that answers to the call for longitudinal research on behaviour in boards by exploring the variables not in a static state but as either increasing or decreasing dynamic variables.

Chapter 4 illustrates how conflict dimensions indeed tend to behave differently in an environment with increasing or decreasing cohesion. The positive effect of task conflict on board task performance is stronger when cohesion in a board has also increased. When cohesion and task conflict both show a decreasing trend, this is at the expense of the supervisory board's control task performance in particular. Remarkably, cohesion within a supervisory board is also an important moderator of the effect of relational conflict on the effectiveness of supervisory boards. If relational conflict increases, this has - completely contrary to all expectations - a positive effect, for as long as cohesion within a board also increases. It suggests that supervisory boards can benefit from conflicts, even if they become more personal, as long as, at the same time, they also remain unified in their goals.

Chapter 5 moves further by combining the surveys from the three consecutive years to examine the interplay of conflict, cohesion and performance in supervisory boards from a more complex theoretical framework in which various configurations of conflict dimensions are treated as 'emergent states'. Within the team effectiveness literature, systematic Input-Process-Output models (IPO-models) of team effectiveness are a great tool for exploring behavioural processes and effectiveness of boards as they add to the oversimplified input-output study of boards the intermediating effect of board processes. Hence many studies on behaviour use the metaphor of opening the 'black box' when studying board processes and behaviour (e.g. Leblanc & Schwartz, 2007; Neill & Dulewicz, 2010; Zona & Zattoni, 2007).

However, this traditional IPO-model has a number of related limitations, which need to be addressed in creating a model for supervisory boards. First, the model simplifies the complex interdependencies within the relation between team processes and performance (Ilgen, Hollenbeck, Johnson, & Jundt, 2005). Second, not everything that is termed a process is in fact a process, but rather changing team characteristics or 'emergent states' (Marks, Mathieu, & Zaccaro, 2001). A third limitation of the traditional IPO-model is the static conceptualization of processes, approaching teams as if they were placed out of time (Cronin, Weingart, & Todorova, 2011; Kozlowski, 2015).

In Chapter 5 these limitations are addressed through a longitudinal research design in which board's behavioural processes and board task performance are measured at multiple times. This longitudinal approach clarifies the interdependencies between different board processes. Although a longitudinal study is more resource intensive, difficult and risky, it is a necessary step to move beyond oversimplified research designs in team effectiveness studies in general and board effectiveness in particular (Kozlowski, 2015; Van Ees, Gabrielsson, & Huse, 2009). To discern between board behavioural processes and board emergent states, the traditional IPO-model is replaced by an Input-Process-State-Output model (IPSO-model) in Chapter 5 of this dissertation (Marks, Mathieu, & Zaccaro, 2001).

The conflict profiles discussed in Chapter 5 reveal even more clearly how supervisory boards are extraordinary teams in which conflict plays a different role with respect to the effectiveness of the team than it does in other groups. Whereas a relatively high level of relationship conflict is detrimental to other groups, supervisory boards, on the contrary, seem to flourish - especially in terms of their monitoring role - in the face of conflict, even when it becomes personal. Chapter 5 also demonstrates that participative leadership by the chair and conflict management are important in preventing a supervisory board from slipping towards a less effective conflict profile, whereas cohesion in plays a role in shifting towards a more effective conflict profile within a board.

The concluding Chapter 6 builds on the theoretical framework in Chapter 5 and draws on this dissertation research to suggest a conceptual model of boards of directors as complex adaptive systems to advance future research on boards of directors as teams. What now makes a supervisory board effective? This dissertation acknowledges that supervisory boards benefit from clear effort norms and from using the available knowledge and skills within the board. But unlike often assumed and contrary to popular wisdom in management literature, supervisory boards do benefit from conflict. Even when this involves relationship conflicts, that appear damaging to other kinds of teams, to avoid the managerial hubris that brought down organisations like Amarantis and ROC Leiden.

Chapter 2 Promising avenue or dead end street?

A meta analytic review of the Forbes and Milliken model of board behaviour

This chapter is an adaptation of Heemskerk, K. (2019): "Promising avenue or dead end street? A meta analytic review of the Forbes and Milliken model of board behaviour", *Corporate Governance: The International Journal of Business in Society 19*(3), pp. 471-489. https://doi.org/10.1108/CG-01-2018-0017

Introduction

Over the past decade of corporate governance research, the insight that it is not so much the structural or formal characteristics that determine board performance, but rather social and behavioural aspects has been gaining ground (Sur, 2014; Wan & Ong, 2005). Several studies have been conducted, from different theoretical perspectives and with different methods, on the behavioural processes within boards of directors (Murphy & McIntyre, 2007; Neill & Dulewicz, 2010).

Within this diverse stream of research, the concise and researchable model presented by Forbes and Milliken in 1999 has been the most promising avenue for the behavioural study of boards of directors. Huse considered it to be one of the major building blocks in understanding behavioural perspectives on boards, calling the article: 'a main point of reference for scholars wanting to explore behavioural dynamics in the boardroom' (Huse, 2009b: 64).

The findings in the research on board behaviour and board task performance using Forbes and Milliken, however, seem unclear and inconsistent. Although most researchers do conclude that the behavioural determinants are a better predictor of board performance compared to the formal and structural features, the effects of these behavioural determinants differ across studies (Huybrechts, Voordeckers, D'espallier, Lybaert, & Van Gils, 2016; Kumar & Zattoni, 2017). The effect of cognitive conflicts on board task performance for instance is sometimes not significant (Zona & Zattoni, 2007), negative (Minichilli, Zattoni, Nielsen, & Huse, 2012) or positive (Bailey & Peck, 2011).

Despite the impact their widely cited article has had, these mixed results in subsequent empirical research and the methodological issues associated with survey research on organisational behaviour, left the promise of Forbes and Milliken (1999) to expand and refine our understanding of what makes boards effective unfulfilled (Huse, Hoskisson, Zattoni, & Viganò, 2011).

Does it then make sense to pursue this rather disappointing line of research further or should we abandon the Forbes and Milliken model altogether? Before we throw out the good with the bad, we have to examine what the research into the Forbes and Milliken model of board performance (FM-model) has contributed up till now and asses how the methodological issues it entails are to be addressed in future research on board behaviour.

Hence, a meta-analysis is performed on the effects drawn from empirical studies on (parts of) the FM-model in investigating the three board processes it suggests: effort norms, cognitive conflict and the use of knowledge and skills. Meta-analysis allows us to test the hypotheses within the FM-model empirically with larger datasets than those reported in any single primary study. Furthermore, meta-analytic research can identify possible methodological moderators on the relationships found between board processes and board performance in the studies under consideration. Three methodological issues associated with the research into the FM-model are addressed in this meta-analysis: common method variance, single respondent bias and validity of constructs.

The effects of the use of knowledge and skills and effort norms on board task performance are found to be significant across studies, while the effects of cognitive conflicts are more heterogeneous (Heemskerk, Heemskerk, & Wats, 2017). Contrary to what is often thought, common method and response bias seem to pose no serious threat to the outcomes in research on board behaviour as their moderating effects were nonsignificant. The construct validity of cognitive conflict was found to have a strong moderating effect. Operationalisations of cognitive conflict aimed at the frequency of conflicts finds a negligibly small effect (ρ = 0.01), while operationalisations of cognitive conflict aimed at cognitive differences among board members finds a much larger effect (ρ = 0.37). This further emphasises the complexity of conflicts as behavioural processes and calls for recognition of the multidimensionality and interdependency of conflicts in boards.

The next section discusses the hypotheses set forth by Forbes and Milliken (1999) and will further extend the hypotheses from the FM-model with methodological moderators to guide further research. In the third section, the method of meta-analysis is presented and discussed. The fourth section presents the results of the meta-analyses. The findings and the directions for further research are discussed in the final sections of this chapter.

Theory and hypotheses

At the close of the twentieth century, Forbes and Milliken (1999) published their influential article on boards of directors as decision-making groups. They sought to understand the processes and behaviours involved in effective board performance. To do so, they saw a need to go beyond the demography-outcome approach and to incorporate the study of process-variables in the study of boards of directors in order to disentangle the predictions offered by multiple theoretical perspectives with regard to board demography. The effectiveness of boards in their model has two components. Control and service task performance constitute *board task performance*. They further identify three board processes that will influence board task performance: (1) effort norms, (2) cognitive conflict and (3) the use of knowledge and skills. *Effort norms* are useful for ensuring preparation, participation and analysis. *Cognitive conflict* contributes to the leveraging of differences of perspective. *Use of knowledge and skills* is the ability to make use of the resources within the board in performing its tasks. The following hypotheses summarise the propositions as set forth by Forbes and Milliken (1999: 497).

Hypothesis 1: Effort norms will be positively associated with effective board task performance.

Hypothesis 2: Cognitive conflicts will be positively associated with effective board task performance.

Hypothesis 3: The use of knowledge and skills will be positively associated with effective board task performance.

Methodological issues of the FM-model

The mixed results of the FM-model are usually attributed to methodological issues within the self-report survey research of team processes (Huse, 2009a). The key methodological issues in research using the FM-model are common method variance (CMV), relying on single respondents (mostly CEO's) and the validity of the constructs. Almost all studies on the FM-model address the issue of

CMV ex post or ex ante and it is often considered as a limitation of the research performed (e.g. Bailey & Peck, 2011). Likewise, the reliance on the CEO as the only respondent is an issue discussed in the limitations section of most studies (e.g. Zona & Zattoni, 2007). Not all studies reflect extensively on the construct validity of their concepts, but in particular with regard to conflict, the low construct validity is seen as a limitation of the research (Van Ees, Van der Laan, & Postma, 2008).

Common method variance or bias (CMV) is often considered a major threat to the reliability of the correlations in self-report survey research design (Podsakoff, MacKenzie, Lee, & Podsakoff, 2003). This threat of CMV, however, seems to be somewhat exaggerated. Spector (2006) therefore even considers it an urban legend and Fuller and others (2016) argue that survey researchers face an unnecessary 'presumption of guilt' in relation to CMV. Researchers testing for CMV using Harman's one factor test or principal component analyses seldom do find distorting effects of CMV in real-life data and the level of CMV in simulation data seems not to represent a grave threat to the reliability of study outcomes (Fuller, Simmering, Atinc, Atinc, & Babin, 2016). Therefore, the effect of board behaviour in studies that conduct ex-post analyses of CMV are not expected to differ from studies that do not explicitly address the issue of CMV.

Hypothesis 4: Effort norms, cognitive conflict and the use of knowledge and skills will be equally positively associated with effective board task performance when the issue of common method variance is addressed through ex-post analyses.

Survey studies in corporate governance are often based on the CEO as a single respondent (Huse, 2009c; Minichilli, Zattoni, & Zona, 2009). Although the potential threat to the reliability of the data gained through one respondent is recognised, the difficulties in gaining access to multiple board members force studies to limit themselves to one respondent. The CEO then seems the most obvious option for they are in a better position than other board members to report on the functioning of the board (Huse, 2009c; Minichilli, Zattoni, & Zona, 2009). The Value Creating Board Surveys (Huse, 2009a; Sellevoll, Huse, & Hansen, 2007) were conducted among CEOs, board chairs and board members and thus allow for a comparison between different respondents. CEOs are found to be in general less positive on boards' task performance than chairs and other board members (Sellevoll, Huse, & Hansen, 2007: Table 72 and 73). Chairs and other board members also reported higher levels of cognitive conflict and preparation and involvement (Sellevoll, Huse, & Hansen, 2007: Table 63 and 68). Since CEOs are thus more critical of board processes and board performance, we might expect that the effect of board processes would be smaller when measured through the CEO as the single respondent as compared to board chairs and other board members.

Hypothesis 5: Effort norms, cognitive conflict and the use of knowledge and skills will be less positively associated with effective board task performance when measured through the CEO as single respondent.

Most discussions on the validity of the survey constructs in the FM-model concentrate on the operationalisation of cognitive conflicts or task conflicts. There are broadly two ways in which task conflict is operationalized in studies following the FM-model. Some focus on the frequency of task conflicts while others are more concerned with the underlying cognition differences between board members. Forbes and Milliken themselves make use of Karen Jehn's (1995) definition of task conflicts and point to Jehn's four-item scale for task conflict as a reliable operationalisation of task conflict: "Using this scale, researchers could ask respondents to gauge, using Likert-type items, the frequency of conflicts about ideas and the extent of differences of opinion on the board" (Forbes & Milliken, 1999: 199). However the studies that build on the FM-model differ greatly in their operationalisation of cognitive conflicts. Studies sometimes use different descriptions for cognitive conflicts: intragroup conflict (Garnes & Mathisen, 2014), critical debate (Minichilli, Zattoni, & Zona, 2009) or task conflict (Heemskerk, Heemskerk, & Wats, 2015). And studies using similar descriptions differ in the actual Likert-scale items used. Some follow Forbes and Milliken's suggestion and ask for the frequency of conflicts or disagreement on several issues while others ask for differences in the way board members reason and argue. This difference in focus most likely also has an impact on the effect of task conflict.

Bendersky and others (2010) differentiate between two aspects of task conflicts, either as divergent task conflicts (discussing additional options and alternatives) or as convergent task conflicts (disagreement on a joint decision or solution). The cognition-based operationalisation of cognitive conflict — how board members think and reason — seems to be more aimed at the divergent aspects of task conflict, while the frequency-based operationalisation seems more concerned with the convergent aspects of task conflict. The performance-enhancing effects of cognitive conflict are attributed especially to the divergence of views and arguments (Forbes & Milliken, 1999: 494). This divergence in opinions, solutions and arguments is more likely to be found in the cognition-based operationalisation than in the one that focuses more on the frequency of conflicts. We thus might expect a stronger effect of cognitive conflict on board task performance in studies using a cognition-based operationalisation compared to studies using a frequency-based operationalisation of cognitive conflict.

Hypothesis 6: Cognitive conflict will be more positively associated with effective board task performance when survey items focus on cognition rather than frequency of conflicts.

Inclusion criteria and effect size

To review the empirical evidence on the hypotheses within the FM-model and to test for the additional hypotheses on methodological moderators, meta-analyses were conducted as a quantitative method for combining evidence from different studies (Schmidt & Hunter, 2014). First, all studies citing the 1999 Forbes and Milliken article were searched using Google Scholar (1485 articles) and Web of Science (361 articles) up until August 16, 2016. Those articles that empirically tested the hypothesis of the FM-model were selected by screening the abstracts of these articles. Inclusion criteria were primarily the explicit use of (part of) the FM-model to quantitatively examine board effectiveness. Qualitative studies using the FM-model, quantitative studies on board behaviour not using the FM-model or quantitative studies using the FM-model but not inquiring board effectiveness were not included. Three quantitative studies missing effect sizes on the FM-model relations were not included (Mande, Ishak, Idris, & Ammani, 2013; Marchewka, 2015; Zona, 2015). The final sample consisted of 17 primary studies (see Appendix A). All included studies were coded using a coding guide in line with the suggestions of Cooper (2009).

The Pearson correlation coefficient (*r*) for board processes and board task performance was used as effect size to integrate results from the included studies. The correlation coefficient is commonly used in meta-analyses for it is a scale-free measure of linear association. 70 correlations between board processes and board outcomes were obtained. As previously elaborated, the various studies differ in the way they classify board tasks. Some treat board task performance as one monolithic dependent variable, while others use different two- or threefold classification in their operationalisation of board task performance.

For the inclusion of the board task performance variables, the classification of board task performance as service and control in the FM-model was followed and when possible a distinction was made between the control or monitoring board task performance and the service or advisory task of board directors. Additional board tasks outside the scope of the FM-model, such as the performance of the resource-dependency role of the board (Wan & Ong, 2005) or the networking role of the board (Zona & Zattoni, 2007), were excluded from the analyses (Forbes & Milliken, 1999: 501-502). The included independent and dependent variables and the effect sizes extracted are presented and accounted in Table 1.

Table 1. Overview of all included studies, variables and effect sizes

Author	N	Setting	Process variables included	Board performance variables included	Effect sizes (r)
1. (Wan & Ong, 2005)	424	Listed firms in Singapore	EN CC UKS	A. Service role B. Monitoring role	EN x A: 0.44 EN x B: 0.57 CC x A: 0.38 CC x B: 0.47 UKS x A: 0.56 UKS x B: 0.58
2. (Zona & Zattoni, 2007)	301	Large manufacturing firms in Italy	EN CC UKS	A. Service B. Monitoring	EN x A: 0.50 EN x B: 0.33 CC x A: 0.00 CC x B: 0.00 UKS x A: 0.25 UKS x B: 0.39
3. (van Ees et al., 2008)	136	Large firms in the Netherlands	EN CC UKS	A. Strategy B. Monitoring	EN x A: 0.19 EN x B: 0.38 CC x A: 0.02 CC x B: 0.45 UKS x A: 0.24 UKS x B: 0.57
4. (Minichilli et al., 2009)	301	Large industrial firms in Italy	EN (commitment) CC (critical debate)	A. Service: Advisory task, networking task and strategic participation B. Control: Behavioural control, output control and strategy control.	EN x A: 0.46[1] EN x B: 0.41[1] CC x A: 0.08[1] CC x B: 0.01[1]
5. (Gnan & Zattoni, 2009)	498	Small firms in Norway	EN (commitment) CC	A. Advisory task B. Control task	EN x A: 0.26[2] EN x B: 0.19[2] CC x A: 0.27[2] CC x B: 0.30[2]
6.(Scarborough, Haynie & Shook, 2010)	135	Firms with a corporate secretary in the US	EN	Board activism	EN: 0.56
7. (Bailey & Peck, 2011)	104	Publicly traded firms in the United Stated	EN CC UKS	Board task performance	EN: 0.53 CC: 0.69 UKS: 0.50
8. (Namoga, 2011)	86	Public and private enterprises on Fiji and Solomon Islands	EN CC UKS	A. Service role performance B. Monitoring and control role performance	EN x A: 0.62 EN x B: 0.17 CC x A: 0.44 CC x B: 0.29 UKS x A: 0.45 UKS x B: 0.73
9. (Minichilli et al., 2012)	535	Listed and large firms in Norway and Italy	EN CC UKS	A. Advisory task performance B. Control task performance	EN x A: 0.40 EN x B: 0.36 CC x A: 0.01 CC x B: 0.01 UKS x A: 0.34 UKS x B: 0.26
10. (Garnes & Mathisen, 2014)	307	Collaborative tourist organisations in Norway	EN CC	Board commitment	EN 0.44 CC -0.30

11. (McNulty et al., 2013)	141	Large firms in the United Kingdom	EN CC UKS	Financial risk-taking	EN: 0.22[3] CC: 0.20[3] UKS: -0.02[3]
12. (Msweli & Singh, 2014)	289	State owned firms in South Africa	EN CC UKS	Board decision quality	EN: 0.45 CC: 0.54 UKS: 0.60
13. (Zattoni et al., 2015)	488	SMEs in Norway	EN CC UKS	A. Strategy task performance B. Monitoring task performance	EN x A: 0.50 EN x B: 0.37 CC x A: 0.10 CC x B: 0.01 UKS x A: 0.65 UKS x B: 0.66
14. (Heemskerk et al., 2015)	148	Educational organisations in the Netherlands	EN CC (task conflict) UKS	A. Advisory task performance B. Control task performance	EN x A: 0.39 EN x B: 0.39 CC x A: 0.33 CC x B: 0.32 UKS x A: 0.32 UKS x B: 0.41
15. (Ranasinghe et al., 2015)	184	Listed firms in Australia	EN CC UKS	Monitoring of financial reporting	EN: 0.33 CC: 0.10 UKS: 0.30
16. (Mostert, Veltrop, van Veen-Dirks, & de Haan, 2015)	285	Banks and insurance companies in the Netherlands	CC	A. Board advice provision B. Board monitoring	CC x A: -0.09 CC x B: 0.21
17. (Zona, 2016)	109	Family firms in Italy	EN CC UKS	Board performance	EN: 0.61 CC: 0.21 UKS: 0.43

Note: EN = effort norms, CC = cognitive conflict and UKS = the use of knowledge and skills [1] Both board roles were measured as three separate variables. Although one should in general not add up correlations, the similarity of the three board roles both in concept as in outcome makes it justifiable to compute a mean r using Fisher's z-transformation. [2] Effect sizes in this study were reported as βs within a multiple regression analysis. Estimates of effect sizes as r are calculated using the transformation suggested by Peterson & Brown (2005): $r = .99\beta + .04\lambda + 0.2\eta$ with $\lambda=1$ (for $\beta>0$) and $\eta=1$ (for the average intercorrelation of the predictor variable set is >.18). [3] Effect sizes of the three (inverse) proxies of financial risk-taking during the credit crisis: ΔCash&Equivalents, ΔNetCash and ΔFinancialSlack were reported separately. Given the similarities, conceptual as well as numerical, a mean effect size for r was computed using Fisher's z-transformation.

Meta-analysis techniques

For the meta-analysis of the main effects, a random-effects model was used. Sampling variance was calculated using the formula in Hedges and Olkin (1985): $Var(e) = (1 - \rho^2)^2/N-1$. As suggested by Schmidt and Hunter (2014) the population correlation (ρ) in the calculated sampling variance was estimated by the mean observed correlation rather than the individual study correlations; for the latter might lead to a negative bias (Aguinis, 2001). Study-level variance was estimated using Schmidt and Hunter's (2014) estimator of heterogeneity variance ($\tau^2 = \max\{0,(Q-k)/\sum W_i\}$). Calculations were performed directly on the correlation coefficients (Schmidt & Hunter, 2014). No artefact corrections were performed since the study characteristics are treated as moderating effects in the analyses.

Table 2. Meta-analyses results

	k	N	Mean r	Mean ρ	SE ρ	95% confidence interval	Q test of homogeneity
Overall board performance							
Effort norms	16	3793	0.42	0.41	0.026	0.36; 0.46	54.37**
Cognitive conflict	16	3943	0.21	0.19	0.052	0.09; 0.29	177.18**
Use of knowledge & skills	12	2552	0.41	0.39	0.046	0.31; 0.48	85.15**
Service task performance							
Effort norms	9	2705	0.43	0.41	0.036	0.34; 0.48	42.80**
Cognitive conflict	10	2990	0.16	0.14	0.048	0.05; 0.24	69.07**
Use of knowledge & skills	7	1906	0.41	0.40	0.061	0.28; 0.52	67.84**
Control task performance							
Effort norms	9	2705	0.36	0.35	0.035	0.29; 0.42	36.44**
Cognitive conflict	10	2990	0.21	0.20	0.054	0.09; 0.30	92.21**
Use of knowledge & skills	7	1906	0.53	0.51	0.064	0.38; 0.64	98.24**

Note: k = number of effect sizes; N = total sample size; r = mean estimate of uncorrected correlations; ρ = mean estimate of corrected population correlation; SE ρ = estimated standard error of ρ. Overall board task performance for studies reporting separate effects for service task performance and control task performance was calculated by computing their mean using Fisher's (inverse) z-transformation. * $p < 0.05$; ** $p < 0.01$

For the moderator analyses, a hierarchical two-stage approach was followed. First, a mixed effects model, using Schmidt and Hunter's (2014) estimator of heterogeneity variance, was calculated to test the moderator hypotheses of the dummy-coded moderators. Second, a subgroup analysis of fixed effects was conducted, in which the calculating of the meta-analytic mean correlations and confidence intervals were adopted from Hedges and Olkin (1985). The mean correlation coefficient (r) was calculated using Fisher's (inverse) transformation ($z = ½\mathrm{Ln}((r+1)/(r-1))$) to correct for skewness in the effect size distribution. Mean ρ was estimated by weighting the effect sizes as z-scores by their sample size (mean $z = \sum(n-3)z/\sum(n-3)$) and converted to mean rho (ρ) using Fisher's transformation. The random and mixed effects models were calculated in R version 3.2.4 using the metafor package version 1.9-9 (R Core Team, 2013; Viechtbauer, 2010). Fixed effect subgroup calculations were done by hand using the suggestions by Hedges and Olkin (1985).

Results

Table 2 presents meta-analytic evidence that further bears on the broad relationships between board processes and board task performance. Analyses of the funnel plots for these effects, presented in Figure 1 suggest no distorting effect of publication bias (Egger, Smith, Schneider, & Minder, 1997). Since most studies compare the effects of board processes in the FM-model with the formal characteristics of boards (size, composition, CEO-duality, etc.) it is indeed not expected that non-significant findings will not be published. Support was found for Hypothesis 1, which proposed a positive relationship between effort norms and board task performance; a positive relationship was found between effort norms and overall board task performance (ρ = .41, CI = .36–.46), as well as between effort norms and both service and control task performance (ρ = .41, CI = .34–.48 and ρ = .35, CI =.29–.42, respectively). Effort norms thus seem relevant behavioural determinants of board task performance.

The meta-analysed effect of cognitive conflict on overall board task performance is rather small (ρ = .19, CI = .19–.29). Given the value of Q relative to the number of studies included (I^2 > 90%[1]) indicating evidence of considerable heterogeneity, the effect is too small to firmly confirm Hypothesis 2, which predicted a positive association between cognitive conflicts and effective board task performance. The separate effects of cognitive conflict on service task performance (ρ = .14, CI = .05–.24) and control task performance (ρ = .20, CI = .09–.30) do not support the idea that cognitive conflicts have a different effect on specific board tasks. Support was found for Hypothesis 3, which proposed a positive association between the use of knowledge and skills and effective board task performance. This positive relationship was found between the use of knowledge and skills and overall board task performance (ρ = .39, CI = .31–.48) as well as between the use of knowledge and skills and both board *service* task performance and board *control* task performance (ρ = .40, CI = .28–.52 and ρ = .51, CI =.38–.64, respectively).

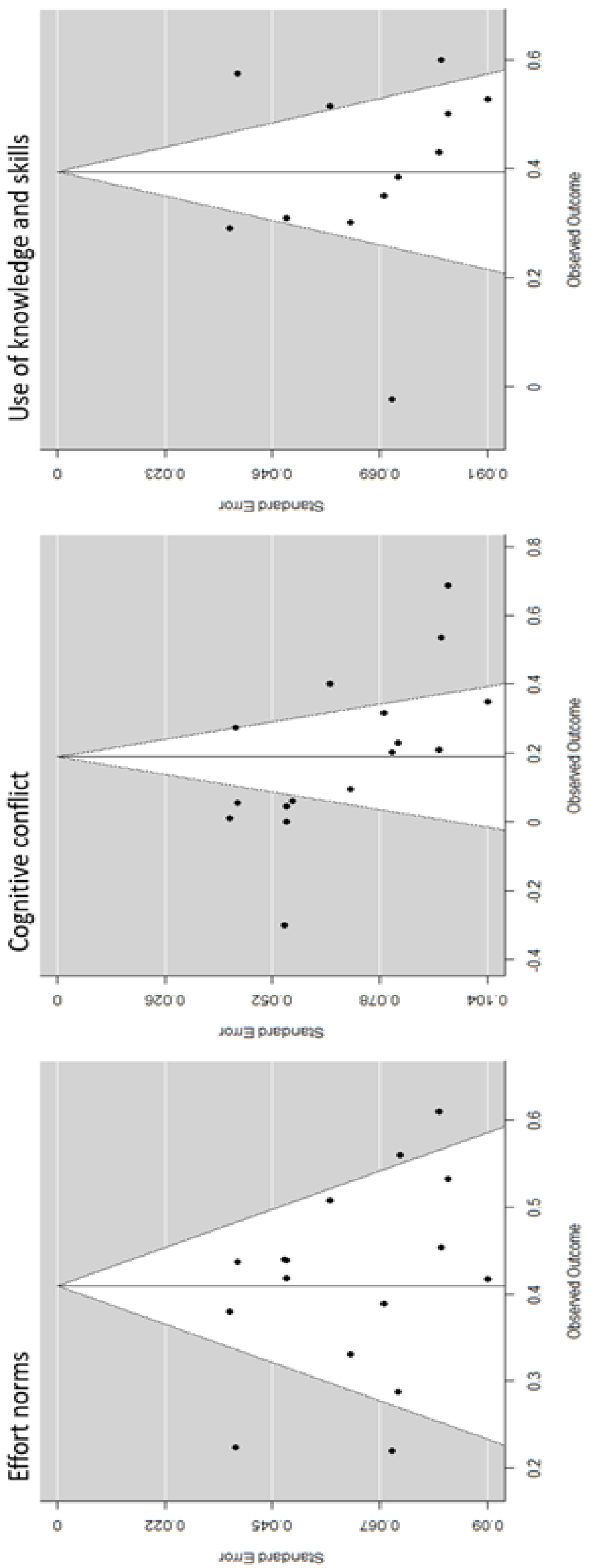

Figure 1. Funnel plots of the main effects

Methodological moderating effects

The Q-values reported in Table 2 suggest the existence of moderating variables. To test Hypothesis 4, which proposed no moderating effect of ex-post controlling for CMV-issues on the relation between board processes and board task performance, the included studies were divided into two categories: studies in which the possibility of CMV was assessed through Harman's one factor test or other statistical post analyses (Podsakoff, MacKenzie, Lee, & Podsakoff, 2003) and studies in which such analyses were not reported.

Table 3. Meta-analysis of the moderating effect of ex-post CMV testing on board task performance

	k	N	Mean r	Mean ρ	95% confidence interval	Q test
No ex-post CMV tests[a]						
Effort norms	7	1571	0.41	0.37	0.33; 0.41	29.59**
Cognitive conflict	7	1721	0.18	0.11	0.07; 0.16	101.06**
Use of knowledge & skills	3	675	0.51	0.49	0.40; 0.58	4.12
Ex-post CMV test[b]						
Effort norms	7	1897	0.47	0.44	0.40; 0.47	10.79
Cognitive conflict	7	1897	0.26	0.14	0.09; 0.18	74.55**
Use of knowledge & skills	7	1897	0.43	0.42	0.38; 0.45	38.74**

Note: k = number of effect sizes; N = total sample size; r = mean estimate of uncorrected correlations; ρ = mean estimate of corrected population correlation. * $p < 0.5$; ** $p < 0.1$. [a] includes: Garnes and Mathisen (2014), Gnan and Zattoni (2009), Minichilli et al. (2009), Mostert et al. (2015), Msweli and Singh (2014), Namoga (2011), Scarborough et al. (2010) and Van Ees et al. (2008); [b] includes: Bailey and Peck (2011), Heemskerk et al. (2015), Minichilli et al. (2012), Wan and Ong (2005), Zattoni et al. (2015), Zona and Zattoni (2007) and Zona (2016)

The two studies with a multi-method research design were excluded from the analyses (McNulty, Florackis, & Ormrod, 2013; Ranasinghe, Mather, & Young, 2015). For all three board processes, the moderator model for ex-post CMV controlling was non-significant ($Q_{m\ \text{effort norms}} = 1{,}58$; $p > .05$, $Q_{m\ \text{cognitive conflict}} = 0{,}35$; $p > .05$ and $Q_{m\ \text{use of knowledge and skills}} = 0{,}78$; $p > .05$). Results of the meta-analyses for both categories are summarised in Table 3, which further support Hypothesis 4 as the confidence intervals for all three board processes overlap in both cases.

To test for the moderating effect of relying on the CEO as single respondent versus the use of other respondents, the studies were grouped by those targeting the CEO and those who surveyed other or multiple respondents (board chairs, non-executive directors, board secretaries, etc.). Studies that combined data gathered from both CEOs and (supervisory) board chairs were thus classified as using other respondents (Van Ees, Van der Laan, & Postma, 2008).

The type of respondent as a moderator was found not significant for all three board processes ($Q_{m\ \text{effort norms}} = 0.07$; $p > .05$, $Q_{m\ \text{cognitive conflict}} = 1.21$; $p > .05$, $Q_{m\ \text{use of knowledge and skills}} = 0.00$; $p > .05$). The results of the meta-analyses presented in Table 4 further illustrate that, contrary to Hypothesis 5, there is no significant difference in effects of board processes in studies only targeting the CEO compared to studies using other or multiple respondents.

Table 4. Meta-analysis of the moderating effect of respondents on board task performance

	k	N	Mean r	Mean ρ	95% confidence interval	Q test
CEO respondent[a]						
Effort norms	7	2380	0.42	0.39	0.35; 0.42	29.16**
Cognitive conflict	7	2380	0.13	0.11	0.07; 0.15	34.37**
Use of knowledge & skills	5	1581	0.40	0.41	0.36; 0.45	37.84**
Other respondent(s)[b]						
Effort norms	9	1413	0.42	0.42	0.38; 0.47	21.57**
Cognitive conflict	9	1563	0.27	0.17	0.12; 0.22	156.85**
Use of knowledge & skills	7	971	0.42	0.40	0.35; 0.45	45.83**

Note: k = number of effect sizes; N = total sample size; r = mean estimate of uncorrected correlations; ρ = mean estimate of corrected population correlation. * p < 0.5; ** p < 0.1. [a] includes: Gnan and Zattoni (2009), Heemskerk et al. (2015), Minichilli et al. (2009), Minichilli et al. (2012), Zattoni et al. (2015), Zona and Zattoni (2007) and Zona (2016); [b] includes: Bailey and Peck (2011), Garnes and Mathisen (2014), McNulty et al. (2013), Mostert et al. (2015), Msweli and Singh (2014), Namoga (2011), Ranasinghe et al. (2015), Scarborough et al. (2010), Van Ees et al. (2008) and Wan and Ong (2005)

Hypothesis 6 predicted that cognitive conflict is more positively associated with effective board task performance in studies that used cognition-based items rather than frequency-based items. To test for the moderating effect of operationalisation of cognitive conflict, the studies were grouped by those primarily inquiring the frequency of conflicts on different subjects and those that asked about the differences in reasoning and arguing within the board. An overview of all survey items on cognitive conflict in the included studies can be found in Appendix B. One study did not report survey items and was excluded from the analysis (Ranasinghe, Mather, & Young, 2015). The moderator model was indeed found significant (Q_m = 27.49; p < .01) and the differences in meta-analysed effect size, as shown in Table 5, are indeed quite large (ρ = .01, CI = .03–.05 for frequency-based studies ρ = .37, CI = .32–.41 for cognition-based studies). While both sets of studies remain heterogenic, the level of heterogeneity is more equally divided and less excessively high (I^2 < 90%).

Table 5. Meta-analysis of the moderating effect of the item types of cognitive conflict on board task performance

	k	N	Mean r	Mean ρ	95% confidence interval	Q test
Cognitive conflict						
Frequency-based items[a]	8	2467	0.04	0.01	0.03; 0.05	42.82**
Cognition-based items[b]	7	1292	0.41	0.37	0.32; 0.41	35.09**

k = number of effect sizes; N = total sample size; r = mean estimate of uncorrected correlations; rho = mean estimate of corrected population correlation. * p < 0.5; ** p < 0.1. [a] includes: Garnes and Mathisen (2014), McNulty et al. (2013), Minichilli et al. (2009), Minichilli et al. (2012), Mostert et al. (2015), Zattoni et al. (2015), Zona and Zattoni (2007) and Zona (2016); [b] includes: Bailey and Peck (2011), Gnan and Zattoni (2009), Heemskerk et al. (2015), Msweli and Singh (2014), Namoga (2011), Van Ees et al. (2008) and Wan and Ong (2005)

Discussion and conclusions

The purpose of this meta-analysis is to answer to the subquestion in Chapter 1 in twofold ways. First, the aim is to take stock of the research on the FM-model and to estimate the effect of effort norms, cognitive conflicts and the use of knowledge and skills on board task performance. A second objective is to assess the moderating effect of the methodological issues within self-report survey research on the FM-model to guide the follow-up research in the next chapters.

Regarding the first objective, the meta-analyses performed demonstrate that there is enough evidence for the significant positive effect of both effort norms and the use of knowledge and skills on board task performance. The meta-analysis of the effect of cognitive conflict on board task performance, however, demonstrated considerable heterogeneity. This further underlines the severe differences in findings between studies and makes it hard to draw conclusions. Some empirical studies have found that the impact of cognitive conflict depends on the board task and have suggested that cognitive conflict has a more positive impact on the service task of a board than on its control task (Heemskerk, Heemskerk, & Wats, 2015; Zattoni, Gnan, & Huse, 2015). However, the similarities found in the meta-analysis for the effect on board control task performance and board service task performance do not support this supposition.

The inconclusive findings on cognitive conflict reflects the ongoing debate in the team effectiveness literature on the possible positive effects of task conflicts. At the end of the previous century, Jehn (1995) found that task conflicts increased team performance and Amason (1996) showed that task conflict was positively linked to decision-quality in TMTs. However, this positive perception on task conflict began to tilt when De Dreu and Weingart (2003) detected no positive effect of task conflict on team performance in their meta-analysis. They only left room for positive effects of conflicts "under very specific circumstances" (De Dreu & Weingart, 2003: 748).

Two meta-analyses on conflict and team performance provide further insights into these specific circumstances. First, the effect seems to be context dependent; task conflicts produce more positive outcomes for strategic and complex decision-making and more negative outcomes for routine tasks (O'Neill, Allen, & Hastings, 2013). Second, the effect seems to depend on the organisational level at which they occur; the higher up in the organisational hierarchy, the more positive the effects of task conflicts are (De Wit, Greer, & Jehn, 2012). This suggests that boards might benefit from task conflict, because they are typically involved in non-routine decision-making at the apex of organisational hierarchy (Heemskerk, Heemskerk, & Wats, 2017).

The heterogeneity in the effects of cognitive conflicts might also partly be due to a limitation of this meta-analysis. There is a certain variation in the operationalisation of board effectiveness between the various included studies (financial risk taking, commitment, etc.) while the measurement of performance has turned out to be a moderator in meta-analyses of the effect of task conflict on team performance (De Wit, Greer, & Jehn, 2012).

In answer to why research on board processes is still limited in number, Huse states that: “Response rates tend to be very low, respondent and common method biases are likely to occur, […] and concept validity is often weak” (Huse, 2009a: 368). The second purpose of this meta-analysis is to assess the effect of these methodological issues: common method variance, relying on a single respondent and validity of concepts.

Research on the FM-model typically uses the same method to measure the dependent and independent variables. It is often believed that such research leads to inflated correlations through common method variance or bias (CMV). The risk of CMV however seems grossly exaggerated. Studies that control for CMV almost never find a confounding effect of CMV and, in simulations, the effect is negligible (Fuller, Simmering, Atinc, Atinc, & Babin, 2016; Spector, 2006). The moderator analysis for ex-post CMV controlling confirms this. no significant differences in effect were found between studies that do and studies that do not check for CMV afterwards. Moreover, in all the studies controlling for CMV, it had no distorting effect on the outcomes. CMV seems to be less of a concern in FM-model research than often assumed.

Another regularly criticized methodological issue in the research on the FM-model is the reliance on the CEO as a single respondent in some of the research (Huse, 2009c). The choice of the CEO as the single respondent is often motivated by the difficult accessibility of non-executive board members and justified by stating that the CEO is the only person that can properly assess both the ins and outs of the organisation as well as the functioning of the board of directors (Heemskerk, Heemskerk, & Wats, 2015; Minichilli, Zattoni, Nielsen, & Huse, 2012). Contrary to our hypothesis the moderator model comparing studies that relied on the CEO as single respondent with studies that relied on other or multiple respondents was not significant. The number of respondents targeted within the board thus does not seem to influence the effect found for the board processes on board effectiveness. This makes the choice to question only the CEO more defensible, but it remains interesting to identify – not at the aggregate, but at the micro level – the differences in responses between CEOs and other board members.

Furthermore, it is interesting to see that there is a notable difference between the cognition-oriented and frequency-oriented operationalisations of cognitive conflict. This points to the need to come to a shared operationalisation of conflicts in board process studies to avoid comparing apples and oranges. Upon closer inspection, operationalisations of conflict appear sloppy and simplistic in both approaches. Frequency-based items often too simply examine if there are frequent conflicts and disagreements among directors (e.g. Minichilli, Zattoni, & Zona, 2009) leaving it unclear to what extent disagreement is cognitive or task-oriented. Cognition-based items differ along studies; in one study, for instance, one of the three items on conflict asked respondents' opinion on the statement: "A good director doesn't wait too long to resign" (Van Ees, Van der Laan, & Postma, 2008: 91). This is an item not used in other studies and it does not seem to adequately measure conflict. It is also troublesome to notice that exactly the same items are sometimes excluded, based on reliability analysis, in one study, yet not excluded in another. For instance, the item "The board is able to reach collectively shared decisions following a full and frank debate", was excluded based on a factor analysis in Bailey and Peck (2011: 14) and was not excluded in McNulty and others (2013) based on a principal component analysis.

Directions for future research

Almost two decades since Forbes and Milliken, strong evidence has been accumulated for the positive effect of board processes such as effort norms and the use of knowledge and skills. Unfortunately the discussion above illustrate that we still lack understanding of what is arguably the most interesting and promising of all board processes: conflict. The actual methodological issues of the FM-model are far more fundamental than the overestimated threats of common method and respondent bias. Empirical research into board behaviour and performance could therefore greatly benefit from further research that changes course from research on conflicts within boards done so far in two important ways.

First, to clarify the effect of conflicts within boards, it is crucial for future research to recognise the multidimensionality of conflicts. The history of the conflict classification as sketched by Jehn (2014) shows a tendency towards a tripartite distinction between task conflicts, process conflicts and relationship conflicts. Task conflicts are focused on the content of the task at hand, process conflicts are focused on how tasks should be accomplished, and relationship conflicts are driven by interpersonal incompatibilities resulting in tension, animosity and annoyance among team members (Jehn, 1995). An important additional distinction typical for conflicts within boards that needs to be included in future research on the FM-model is the difference between intragroup conflicts, debate and arguments among non-executive board members, and debate and arguments between non-executive board members and the CEO and other executive directors (Heemskerk, Heemskerk, & Wats, 2017). More attention to the multi-dimensionality of conflicts and more rigor in the operationalisation of conflicts in future research will bring more insight into the workings of conflicts in boards. This step forwards is taken in Chapter 3 where conflicts are considered from a multi-dimensional perspective.

Second, future research could further address the limitations through a longitudinal research design in which board's behavioural processes and task performance are measured at multiple times. This longitudinal approach would enable us to clarify the interdependencies between different board processes and to unravel the endogeneity in the causal relations between processes and performance (Boyce, Nieminen, Gillespie, Ryan, & Denison, 2015; Byers, Anagnostopoulos, & Brooke-Holmes, 2015). Although a longitudinal study is more resource intensive, difficult, and risky, it is a necessary step to move beyond oversimplified research designs in board effectiveness studies (Van Ees, Gabrielsson, & Huse, 2009). Chapters 4 and 5 pursue this direction by adopting a longitudinal research design regarding conflicts in supervisory boards in educational organisations.

The FM-model is still a promising avenue for gaining insight in the inner working of boards, but to live up to its promise we need to take the next step and improve the rigor and relevance in the behavioural study of boards.

Table 6. Overview of findings in Chapter 2

	Hypotheses		Findings
1	Effort norms will be positively associated with effective board task performance		Effort norms have a positive effect on both the control and advisory task performance by boards.
2	Cognitive conflicts will be positively associated with effective board task performance.		Although there is a moderate positive effect on the overall board task performance, the heterogeneity across studies above all indicates considerable differences between studies on conflict and board effectiveness.
3	The use of knowledge and skills will be positively associated with effective board task performance.		The use of knowledge and skills has a positive effect on both the control and advisory task performance by boards.
4	Effort norms, cognitive conflict and the use of knowledge and skills will be equally positively associated with effective board task performance when the issue of common method variance is addressed through ex-post analyses.		The type of respondent as a moderator was indeed found not significant for all three board processes.
5	Effort norms, cognitive conflict and the use of knowledge and skills will be less positively associated with effective board task performance when measured through the CEO as single respondent.		There is no significant difference in effects of board processes in studies only targeting the CEO compared to studies using other or multiple respondents.
6	Cognitive conflict will be more positively associated with effective board task performance when survey items focus on cognition rather than frequency of conflicts.		While frequency-based surveys barely reveal any effect, the effect in cognition-based surveys is significantly more pronounced.

Note: green indicates support, orange indicates partial support, red indicates no support.

[1] I^2 describes the percentage of variation across studies due to heterogeneity rather than chance. It was calculated using $I^2 = ((Q-df)/Q) * 100\%$

Chapter 3 The multidimensionality of conflict in supervisory boards in educational organisations

This chapter is an adaptation of Heemskerk, K. (2020): “The multidimensionality of conflict in supervisory boards in education in the Netherlands”. *Educational Management Administration & Leadership 48*(3), 549-569. https://doi.org/10.1177/17411432198273

Introduction

As Chapter 2 revealed, past research on board behaviour has not clarified the role conflicts play for the effectiveness of boards and often ignored intermedial variables such as the cohesion within a board. This chapter therefore seeks to answer the question how conflicts impact board performance and the extent to which that impact is influenced by board cohesion and participatory leadership.

As outlined in Chapter 1 of this thesis, The Netherlands is historically exceptional in the degree to which schools are autonomous and therefore provides a good case study for investigating the consequences of increased school autonomy on school governance (Waslander, 2010). Since the 1980s, the transfer of decision-making power and responsibility from the central government to schools has become an increasingly important element in the reform of educational governance in various countries within the Organisation for Economic Co-operation and Development (OECD).

Governments retreated and there was little discussion on this decline of central governance, but the way in which schools dealt with the increasing autonomy was problematic. According to the new administrative vision, more market forces and fewer rules would lead to more quality, but they also led to calculating behaviours and the improper use of competences (Bronneman-Helmers, 2011).

Educational reforms and deregulation in the 1980s expanded the autonomy and scale of educational institutions in the Netherlands (Bronneman-Helmers, 2011; Karsten, 1999). This shift introduced a two-tier governance structure, where a supervisory board of non-executives oversees the school's executive director(s). As set forth in Chapter 1, the supervisory board in education is typically composed of five or seven members with different expertise (such as financial, legal, and educational). These members are volunteers, recruited by the supervisory board themselves through an open application procedure. The executive board of directors often consists of just one person: the chair of the board of executive directors (comparable to the chief executive officer (CEO) in for-profit organisations).

The supervisory board has the legal duty to control and advise the executive board: they decide on the yearly budgets, the overall policy of the school, and act as employer for the executive director. Supervisory boards meet on average six times a year (Blokdijk & Goodijk, 2012; Heemskerk, Heemskerk, & Wats, 2015). A series of financial mismanagement in large Dutch educational institutions, that adopted this two-tier structure, made supervisory boards seem absent. Giving rise to the question what ensures supervisory boards' success.

The inner workings of supervisory boards in educational organisations are still underexplored – a classic black box. Previous research in corporate governance suggests effectiveness has less to do with the structure and composition of the board, than with the actual behaviour of boards (Huse, 2005; Van Ees, Gabrielsson, & Huse, 2009). This should be the same for boards in education, as Deborah Land argues in her review of school board effectiveness: '[…] the ability of board members to work together and reach consensus is essential for boards to exercise their authority' (2002: 254).

The obstacles to understanding board effectiveness are both theoretical, given the different and sometimes unknown intervening variables, and practical, given the time between changes in supervisory board behaviour and the publication of educational results. It is thus difficult to judge the relationship between good governance and educational performance (Ehren, Honingh, Hooge, & O'Hara, 2016; Land, 2002). Therefore, as discussed more extensively in Chapter 1, in this research, 'board task performance' is used to assess supervisory board effectiveness.

Building on the concise model for the behavioural study of boards of directors of Forbes and Milliken (1999) three behavioural antecedents for effective board behaviour are identified: task conflict, effort and the use of knowledge and skills. The notion that effort and the use of knowledge and skills are important determinants of the effectiveness of boards has now become sufficiently well known. The meta-analyses in Chapter 2 clearly demonstrated that the effect of both exceeds that of formal rules or regulations for the composition of boards. However, as pointed out in Chapter 2, the effect of conflicts is less clear (Heemskerk, Heemskerk, & Wats, 2017).

Studies on school board behaviour and effectiveness have often been limited to the negative aspects of conflict within school boards (Ford & Ihrke, 2016; Grissom, 2010, 2014; Land, 2002). This one-sided and one-dimensional orientation leads to the potentially harmful advice to avoid tension and conflicts between, for instance, the principal or superintendent and the school board (Ford & Ihrke, 2016; Land, 2002). An exception is the study by Heemskerk and others (2015) on supervisory boards in educational organisations in the Netherlands. They focus on the positive, cognitive aspects of conflicts as disagreements between group members about the content of the tasks to be performed because of differences in ideas and opinions. Their advice is therefore the complete opposite; to be effective in advising the executive directors, supervisory boards need to thoroughly discuss their varied views and perspectives (Heemskerk, Heemskerk, & Wats, 2015).

What should boards do with this contradictory advice? Should they avoid conflicts or promote robust discussion? Chapter 2 suggest that it is crucial to recognize the multidimensionality of conflicts in order to clarify the effect they have on teams. Conflict is not a monolithic concept; it has different dimensions and different effects on team effectiveness in different contexts (De Wit, Greer, & Jehn, 2012).

A multidimensional model of conflict in supervisory boards

The history of the classification of conflict dimensions as outlined by Jehn (2014) shows a tendency to a tripartite distinction between task conflicts, process conflicts and relationship conflicts. As has been described in more detail in Chapter 1: task conflicts are focused on the content of the task at hand, process conflicts are focused on how tasks should be accomplished, and relationship conflicts are driven by interpersonal incompatibilities resulting in tension, animosity and annoyance among team members (Jehn, 1995, 1997).

Intragroup task conflicts are expected to enhance the performance of supervisory boards in educational organisations for it helps boards in their non-routine and complex decision-making. Intragroup process conflicts, on the other hand, generally have a negative effect on the effectiveness of teams because members of the group are steered away from the performance of their duties. Process conflict within a supervisory board has a place as internally focused conflict, that is, conflict about the organisation of the board itself.

Task conflict and process conflict admittedly are interrelated (Greer, Jehn, & Mannix, 2008), but both are conceptually and empirically so different that it is important to include process conflicts as a distinct dimension in the behavioural study of boards (Kerwin, Doherty, & Harman, 2011). Where task conflicts have a positive effect by bringing different perspectives and possible objections to the table, process conflicts are found to increase anger, animosity, and negative attitudes toward the team (Behfar, Mannix, Peterson, & Trochim, 2011; Jehn, 1997). Process conflicts distract team members from the team's task goals, leading to procrastination or unproductive reticence among team members (Margarida Passos & Caetano, 2005). The effect of process conflict on team performance was even found to be more negative in the non-routine or complex decision-making that is typical for supervisory boards in educational organisations (Hamm-Kerwin & Doherty, 2010).

Intragroup relationship conflicts are conflicts within the board that are driven by interpersonal incompatibilities resulting in tension, animosity and annoyance among board members. Relationship conflict results in low cohesion, which is likely to negatively impact the effectiveness of the board (Jehn, 1995). Westphal and Bednar (2005), for instance, have found that low cohesion between non-executive directors contributed to reluctance in communicating serious doubts about the company's strategic direction.

Since the dimensions of conflict vary in different types of teams (see e.g. Conlon & Jehn, 2009, on conflict in bands) and because both the conceptual and the methodological delineation between these three common types of conflict is not yet completely clear (Bendersky et al., 2010, 2014), it is necessary to consider the specific dimensionality of conflict in the context of boards. An important additional distinction typical for conflicts within supervisory boards is the difference between intragroup conflicts, that is debate and arguments among the non-executive board members versus those between non-executive board members and the executive director(s)

(Heemskerk, Heemskerk, & Wats, 2017). As with intragroup conflicts within a supervisory board, these conflicts between the executive director(s) and the supervisory board are expected to hae three dimensions: executive-board task conflicts, executive board relationship conflicts and executive-board process conflicts.

Executive-board task conflicts are essential for a supervisory board's effectiveness, as it is the supervisory board's task to control and advise the executive directors by challenging and judging their assumptions and strategic choices. In previous research, professional tension between the executives and non-executives was found to be a sign of a well-performing supervisory board (Heemskerk, Heemskerk, & Wats, 2017) Cohesive governance teams with a focus on collective decision-making, such as supervisory boards in educational organisations, are prone to what Sundaramurthy and Lewis (2003) describe as "reinforcing cycles of collaboration" in which managerial entrenchment leads to low-performing boards. To avoid such detrimental reinforcing cycles, supervisory boards need to balance collaboration and control and thus at times take a critical stance towards their executive directors. Executive-board task conflict is essential in this balancing act as it stimulates critical feedback and counters groupthink (Sundaramurthy & Lewis, 2003)

Executive-board process conflicts are mostly about the cooperation and definition of roles between the non-executives and the executives. Due to the increasing autonomy of schools and the accompanying structural and cultural changes in their governance, many supervisory boards in educational organisations are looking for their proper role. This leaves room for different views about this among executive directors and supervisory boards. Chairs of the board of executive directors sometimes complain that supervisory boards are too involved with the details of daily task execution, while supervisory boards sometimes do not feel involved and informed by management. Process conflicts between executive directors and supervisory boards will hinder effective task performance by these boards.

Executive-board relationship conflicts are likely to have a negative effect on supervisory boards' effectiveness, as they could cause executive directors to be less inclined to seek advice from their supervisory boards (Heemskerk, Heemskerk, & Wats, 2017). Westphal (1999) for instance, found that friendship ties between executive and non-executive directors were associated with the frequency with which the executive directors sought strategic advice from their supervisory boards. Relationship conflicts might undermine these social ties and fuel distrust and political battles between executive directors and supervisory boards, reinforcing each other in a vicious circle (Sundaramurthy & Lewis, 2003).

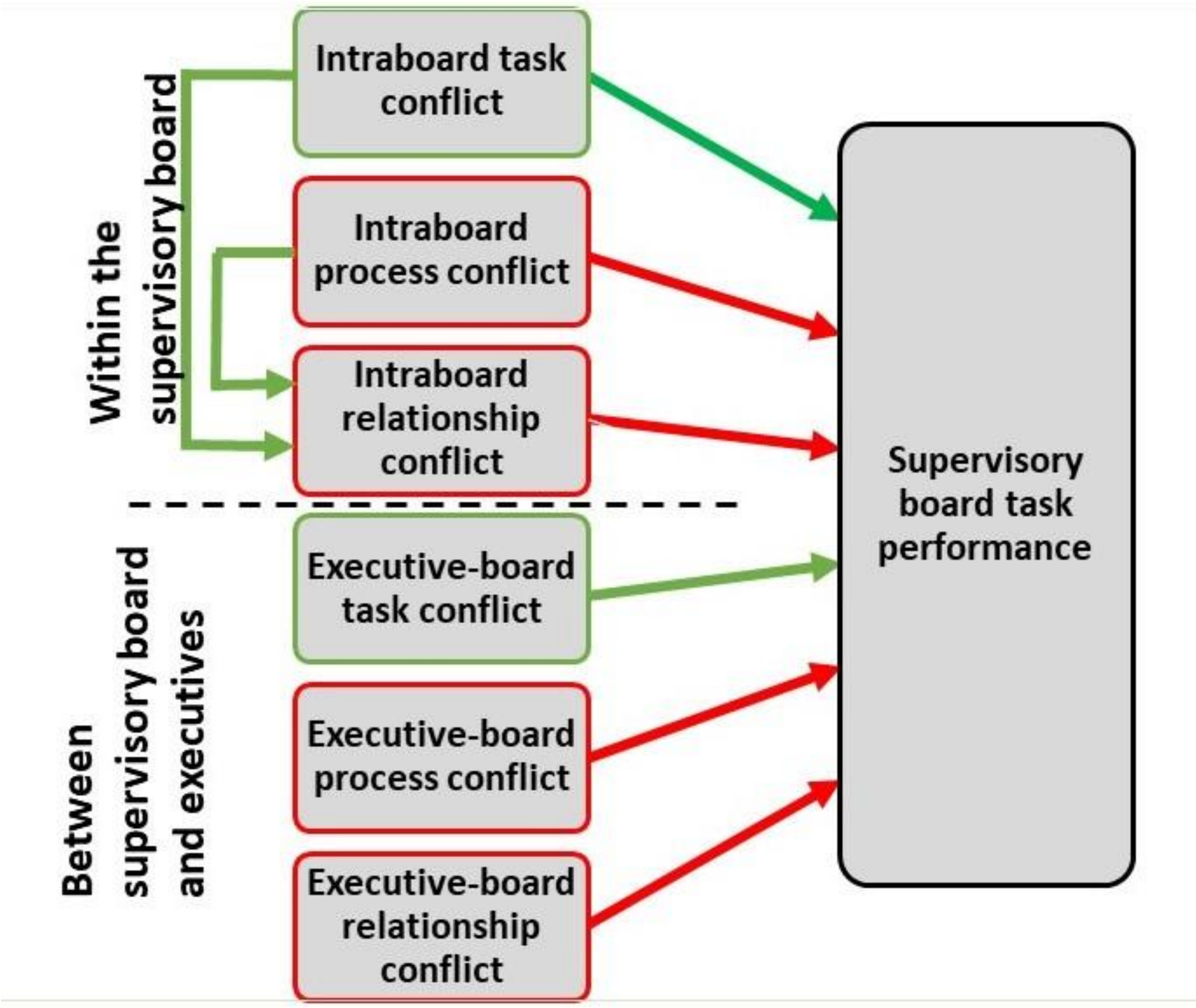

Figure 1. multidimensional model of conflict in supervisory boards

Hypothesis 1: The effect of conflict on the task performance of supervisory boards in educational organisations will depend on the type of conflict. Task conflicts will have a positive effect, while process and relationship conflicts will have a negative effect. The effect of conflict between the executive directors and the supervisory board will be stronger for the controlling than for the advisory task.

Chair participative leadership

The supervisory board chair plays an important role in steering the behavioural group processes within the supervisory board and particularly in creating an environment in which a supervisory board through participative decision-making can be effective in its performance. This requires a participative leadership style that invites and challenges the members of the supervisory board to participate in discussions and decision-making in meetings. This participative leadership differs from the notion of participative leadership in educational reform studies, which focuses on distributed leadership in schools, as it does not refer to some shared influence in decision-making by a school leader with his or her employees (Somech, 2005).

Rather, this supervisory board chair participative leadership refers to a supervisory board chair's openness to all board members' input in the decision-making process by giving them all a chance to voice their opinions and encouraging them to express their ideas (Guerrero, Lapalme, & Séguin, 2015). This prevents some members from feeling put off and developing negative feelings towards the group, leading to fault lines, decline in cohesion or detrimental relationship conflicts (Machold, Huse, Minichilli, & Nordqvist, 2011).

Chair participative leadership further promotes the use of knowledge within the supervisory board and motivates members to provide sufficient effort. Chair participative leadership therefore has a positive effect on supervisory boards' task performance. Part of that positive effect can be explained by how participative chair leadership inhibits harmful conflict within the supervisory board.

Hypothesis 2: The effect of conflict on task performance in supervisory boards in educational organisations will be mediated through participative leadership by the chair of the supervisory board.

Triggering effect

Intragroup task conflicts are found to have a more positive effect on group effectiveness when they are weakly correlated with relationship conflicts (De Wit, Greer, & Jehn, 2012). This is consistent with a frequently suggested explanation for the negative aspects of task conflict, in which task conflict functions as a trigger for relationship conflicts (De Dreu & Weingart, 2003; Mooney, Holahan, & Amason, 2007; Simons & Peterson, 2000).

Task conflicts can have a more positive effect on the performance of a team when these conflicts are prevented from escalating into relationship conflicts. Eisenhardt, Kahwajy and Bourgeois (1997), for instance, found that the management teams of tech companies that were most effective both in speed and quality of decision-making were those that were able to keep constructive conflict about issues from degenerating into dysfunctional interpersonal conflict. Intragroup process conflict likewise is often considered a possible trigger for relationship conflict (Greer, Jehn, & Mannix, 2008; Martínez-Moreno, Zornoza, González-Navarro, & Thompson, 2012). Discussion about who should do what easily degenerates into personal struggles and animosity.

Hypothesis 3: Intraboard relationship conflicts will be triggered by task and process conflicts within a supervisory board in educational organisations.

Board cohesion

Cohesion within a supervisory board is a group-level construct (Hogg, 1993), that refers to both social cohesion, which is the attraction of members to the group, and task cohesion, which is the willingness to work with the group to accomplish shared objectives (Carron & Brawley, 2000).

Cohesion improves participation and communication within a group and also increases the acceptance of the goals, tasks and roles among group members (Casey-Campbell & Martens, 2009; Heemskerk, Heemskerk, & Wats, 2015).

However, Forbes and Milliken (1999) do not assume a linear positive correlation, but an inverted U-shaped relationship between cohesion and board effectiveness. That is, while insufficient cohesion is negative to task performance, too much cohesion might cause groupthink within a board. Groupthink develops when members feel so deeply involved with a group that in their wish for unanimity they lose their ability to reasonably consider alternative decisions (Janis, 1982; Heemskerk, Heemskerk, & Wats, 2015). The relationship between cohesion and performance is, in reality, even more complex, and although groupthink is a serious threat to supervisory boards, cohesion in itself does not seem to be the sole cause of groupthink (Mullen, Anthony, Salas, & Driskell, 1994). The emergence of groupthink also depends on the source of the cohesion within a team. If the cohesiveness of a team is grounded in its members' joint commitment to their task, as is often the case with supervisory boards, instead of on members' interpersonal relationships, groupthink is less likely to occur (Bernthal & Insko, 1993).

Part of the complicated relationship between cohesion and performance seems to run through conflicts within a team. The 'triggering effect' of task conflict on relationship conflict seems to be mediated by cohesion within a group, as suggested by Ensley, Pearson and Amason (2002). They argue that groups with a high degree of cohesion are better able to prevent task conflicts from escalating into relationship conflicts.

Hypothesis 4: The triggering effect of task conflict on relationship conflicts will be moderated by the level of cohesion within a supervisory board in educational organisations. The triggering effect will be stronger in less cohesive boards.

Previous studies point to the crucial role of the supervisory board chair in dealing with conflicts within boards (Heemskerk, Heemskerk, & Wats, 2017). The mediated effect of the board chair's participative leadership on the relation between conflict and performance – as described in hypothesis 2 – is largely due to decreasing the probability that task conflict and process conflict degenerate into personal struggles and feuds within a board. Good chairs who are able to let everyone participate in the deliberations and create a climate for open debate reduce the risk of disagreements on the issues at hand deteriorating into detrimental relationship conflicts (Sundaramurthy & Lewis, 2003).

Hypothesis 5: The effect of task and process conflict on relationship conflict will be moderated by the supervisory board chair's participative leadership. The triggering effect will be stronger in supervisory boards with chairs who offer less-participative leadership.

Method

Gaining access to the black box of the boardroom is seen as the main challenge for behavioural research on good governance. Moreover, social processes are harder to quantify than the formal characteristics of a board, such as the composition or legal structure. In this study, therefore, a survey was designed with several Likert scale items to test the aforementioned hypotheses, providing both access to the inner workings of supervisory boards in educational organisations and quantifiable data on the social processes within these supervisory boards.

In the section on the research method underlying this thesis in Chapter 1, the design of the survey research and the survey items has been discussed in more detail. For this chapter, the results from the 2016 survey among the executive directors have been used. In 2016, after two rounds of reminders, 300 (60%) out of 498 directors responded. Of these respondents the vast majority, 62%, managed a medium-sized educational institution (between 2000 and 8000 pupils), 9% were chair of the board of executive directors of a large educational institution (over 8000 pupils) and 29% worked for a small school with fewer than 2000 students. Most respondents worked for an educational institution for primary (45%) or secondary (30%) education. A smaller number associated with an institution for vocational education and training (*middelbaar beroepsonderwijs*) (6%) or working in special education (4%). In addition, some of the respondents managed an educational institution where primary education and secondary education (5%) or primary education and special education (7%) were both provided. Five respondents (2%) are chair of the board of executive directors of regional partnerships focused on special educational needs (*samenwerkingsverband voor passend onderwijs*). As substantiated in more detail in Chapter 1, the the dependent and independent variables are composed of multiple items on a seven-point Likert scale. Appendix A provides an overview of all items including the theoretical rationale and reliability analyses.

Both dependent and independent variables are measured using the same survey instrument. It is often believed that such a research design leads to inflated correlations through common method variance or bias (Podsakoff, MacKenzie, Lee, & Podsakoff, 2003). The risk of common method bias, however, is exaggerated, as has been illustrated in Chapter 2. Studies that control for common method bias almost never find it to have a confounding effect, and in simulation studies the effect is negligible (Fuller, Simmering, Atinc, Atinc, & Babin, 2016; Minichilli, Zattoni, Nielsen, & Huse, 2012; Spector, 2006). A Harman's single factor test of the data in this study showed that less than 50% of the variance could be attributed to one factor (Chang, Van Witteloostuijn, & Eden, 2020). Common method bias thus does not seem to pose a threat to the reliability of the correlations in this study. Table 1 displays the mean number of cases, standard deviations and the bivariate correlations of all variables.

Results

The correlations in Table 1 suggest support for the main hypotheses, as both intraboard and executive-board task conflict is positively related to both service and control task performance, while intraboard and executive-board relationship conflict seem to have a negative effect on a supervisory

Table 1. mean number of cases, standard deviations and the bivariate correlations

Variables	1	2	3	4	5	6	7	8	9	10	11	12	13
1. Control task performance	1												
2. Service task performance	.660**	1											
3. Executive tenure	.145*	.017	1										
4. Supervisory board meeting frequency	.083	.079	-.041	1									
5. Executive-board chair consultation	.088	.124*	-.105	.170**	1								
6. Intraboard task conflict	.488**	.446**	.061	.023	.073	1							
7. Intraboard process conflict	-.296**	-.198**	-.109	-.024	-.065	-.494**	1						
8. Intraboard relationship conflict	-.365**	.296**	-.073	.015	.003	-.470**	.653**	1					
9. Chair participative leadership	.517**	.479**	.080	.083	.037	.596**	-.492**	-.421**	1				
10. Cohesion	.450**	.408**	.097	.029	.035	.681**	-.516**	-.636**	.581**	1			
11. Executive-board task conflict	.465**	.399**	.058	.106	.075	.631**	-.492**	-.520**	.580**	.589**	1		
12. Executive-board process conflict	-.325**	-.193**	.052	.110	.052	-.372**	.425**	.438**	-.349**	-.377**	-.405**	1	
13. Executive-board relationship conflict	-.318**	-.249**	-.001	-.060	.035	-.410**	.453**	.557**	-.412**	-.487**	-.550**	.451**	1
Mean	*5.28*	*4.58*	*5.31*	*6.00*	*8.91*	*5.66*	*1.83*	*1.66*	*5.94*	*5.64*	*5.96*	*1.57*	*1.94*
Standard deviation	*.939*	*1.16*	*4.35*	*1.24*	*5.61*	*1.01*	*.850*	*.791*	*.886*	*.925*	*.902*	*.720*	*.996*
N	*300*	*299*	*299*	*300*	*293*	*284*	*291*	*276*	*284*	*289*	*286*	*270*	*284*

Note: *p < .05, **p < .01.

board’s task performance. Contrary to expectations, there appears to be a positive relationship between intraboard process conflict and a supervisory board’s service task performance. It is also noteworthy that there is a negative correlation between intraboard task conflict and relationship conflict, which seems to contradict hypothesis 3 in which it was expected that task conflicts trigger relationship conflicts.

To test the first two hypotheses a hierarchical multiple regression analysis was performed on four models. Model 0 includes the control variables: Chair of the board of executive directors tenure, frequency of supervisory board meetings and executive-board chair consultation. Next, in model 1, the three dimensions of intraboard conflict – task conflict, process conflict and relationship conflict – are added. Model 2 adds the supervisory board chair’s participative leadership to the analyses. Model 3 further adds the dimensions of executive-board conflict. Model 4 explores the interaction effect of chair participative leadership and conflict.

The findings of the hierarchical multiple regression analysis are presented in Table 2. As expected from the correlation analysis, the control model only showed executive tenure and the frequency of executive-board chair consultations to have significant effects on the performance of the control and service tasks respectively. The fit of the different models furthermore shows that the model with the control variables has little explanatory value ($\overline{R}^2$ = .018 and .008).

The first model, with the three dimensions of intraboard conflict, shows, as expected, a significant positive effect for task conflicts and a negative effect for relationship conflict, but, contrary to the correlation analysis, intraboard process conflict has no effect on control task performance and the impact on service task performance now turns positive. Adding chair participative leadership in the second model leads to a further increase in explanatory power ($\overline{R}^2$ = .295/.277), while the inclusion of the executive-board dimensions of conflict in model 3 leads to a small increase of fit for the control task ($\overline{R}^2$ = .318) and a negligible decrease of fit for service task performance ($\overline{R}^2$ = .275). The only executive–board dimension that affects the performance of the supervisory board are

Table 2. Regression analyses of main effects

	Model 0 Control task	Model 0 Advisory task	Model 1 Control task	Model 1 Advisory task	Model 2 Control task	Model 2 Advisory task	Model 3 Control task	Model 3 Advisory task	Model 4 Control task	Model 4 Advisory task
Executive tenure	.142*	.003	.100†	-.025	.105†	-.021	.137*	-.023	.147**	-.015
Supervisory board meeting frequency	.083	.036	.062	.016	.046	-.002	.049	-.016	.055	-.011
Executive–board chair consultation	.061	.132*	.056	.125*	.064	.132*	.075	.125*	.075	.126*
Intraboard task conflict			.432**	.447**	.295**	.302**	.243**	.277**	.255**	.286**
Intraboard process conflict			.038	.165*	.123†	.255**	.165*	.259**	.169*	.262**
Intraboard relationship conflict			-.123†	-.148*	-.119†	-.143*	-.038	-.119	-.032	-.114
Chair participative leadership					.311**	.328**	.260**	.303**	.069	.156
Executive-board task conflict							.075	.086	.067	.080
Executive-board process conflict							-.133*	.047	-.142*	.040
Executive-board relationship conflict							-.106	-.052	-.750†	-.548
Chair participative leadership * Executive-board relationship conflict									.609†	.470
R^2	.018	.008	.237	.212	.295	.277	.318	.275	.324	.277

Note: *p < .05; **p < .01; †p < .1.

process conflicts; these have a small but significant effect ($\beta = .133$, $p < .05$) on the control task performance of the board.

Model 2 thus appears to best describe the variance in task performance. The hierarchical regression analysis partially confirms the first hypothesis. Different types of conflict indeed have different effects on task performance by supervisory boards in educational organisations. Task conflicts have a positive effect, relationship conflicts have a negative effect and, contrary to the expectation in hypothesis 1, process conflicts have a small positive effect on supervisory boards' task performance. The dimensionality of executive-board conflicts does not seem to be significant. Only executive-board process conflict appears to have a small negative impact on the control task alone. This is consistent with the hypothesis that the effect of executive-board conflict would be stronger for control than for service task performance in supervisory boards in educational organisations.

Chair participative leadership appears to have a solid stand-alone effect on the performance of supervisory boards in educational organisations in the hierarchical regression analysis. However, this effect, unlike the expectations expressed in hypothesis 2, cannot be sufficiently explained by interaction effects with the various dimensions of conflict. A small significant relationship with the controlling task of supervisory boards has only been found for the interaction effect of chair participative leadership and executive-board relationship conflict, as presented in model 4 in Table 2. The hypotheses 3, 4 and 5 with regard to the triggering of relationship conflicts by process and task conflicts and the moderating effect of cohesion and chair participative leadership were tested by a second hierarchical regression analysis with relationship conflicts as the dependent variable. Four models were assessed in this analysis. There was a control model with three control variables: executive tenure, frequency of supervisory board meetings and executive-board chair consultation. The first model looked at both task and process conflict and the second model assessed both of the assumed moderators; cohesion and chair participative leadership. A fourth model added the combined effect of chair participative leadership and intraboard process conflict to the analyses. The findings of the hierarchical multiple regression analysis are presented in Table 3.

Table 3. Regression analyses of triggering effect on relationship conflicts

	Model 0	Model 1	Model 2	Model 3
Executive tenure	-.064	.011	.035	.041
Supervisory board meeting frequency	-.030	-.018	-.019	-.020
Executive–board chair consultation	.028	.037	.051	.051
Intraboard task conflict		-.203**	.006	.001
Intraboard process conflict		.550**	.452**	1.16**
Board cohesion			-.476**	-.498**
Chair participative leadership			.095†	.370**
Chair participative leadership * Intraboard process conflict				-.647*
Adj. $\overline{R^2}$	-.006	.427	.535	.545

Note: *p < .05; **p < .01; †p < .1

Hypothesis 3 on the triggering effect was partially supported. Process conflict was indeed found to have a significant positive effect on the occurrence of relationship conflict within supervisory boards in educational organisations. Intraboard task conflicts on the other hand seem to rather mute or prevent, instead of trigger relationship conflicts, since their effect was found to be significantly negative.

Adding cohesion and chair participative leadership to the regression model seems to fully absorb this damping effect of task conflicts. Board cohesion has a strong negative effect on the occurrence of relationship conflicts within a supervisory board, while participative leadership has a small positive effect. A supervisory board chair who invites members to voice their opinions seems to run the risk of triggering relationship conflicts. However no interaction effects of cohesion or chair participative leadership were found to be significant, except for the combined effect of participative leadership and process conflict.

To further test hypotheses 4 and 5, subsample regression analyses were performed. An overview of the results is presented in Table 4. First, the initial sample was divided into more-cohesive and less-cohesive supervisory boards with the mean level of cohesion as the cut-off point.

Contrary to the expectations formulated in hypothesis 4, the mitigating effect of task conflict on relationship conflict was found to be significant in less-cohesive and insignificant in more-cohesive supervisory boards.

This could be explained by the fact that – as shown in Table 3 – there is a strong linkage between cohesion and a supervisory board's level of relationship conflict. In less-cohesive boards the mean level of relationship conflict is 2.15 (SD = .87), while in more-cohesive boards this drops to no more than 1.32 (SD = .48) on average. With so little relationship conflict occurring in more cohesive supervisory boards, it is not surprising that there remains no significant mitigating effect of task conflict, since there is little left to mitigate.

Table 4. Subsample analysis of the triggering effect on relationship conflicts

	Less cohesive supervisory boards	More cohesive supervisory boards	Less participative chairs	More participative chairs
Intraboard task conflict	- .181*	- .028	- .096	- .262**
Intraboard process conflict	.456**	.567**	.683**	.429**
Adj. $\overline{R^2}$	.270	.323	.514	.316

Note: *p < .05; **p < .01

In a second subsample regression analysis the initial sample was divided into more-participative leading supervisory board chairs and less-participative leading chairs with the mean level of chair participative leadership as the cut-off point. The regression analysis in Table 4 shows how the mitigating effect of task conflict on relationship conflict found in the previous analysis depends on the level of participative leadership by the chair of the supervisory board. In boards with less-participative leading chairs the mitigating effect is insignificant, while in more-participative chairs the effect is rather strong. Moreover, more-participative chairs also seem to dampen some of the triggering effect of process conflict on relationship conflicts.

Discussion and conclusions

The findings in this research underscore the need for a multidimensional conceptualization of conflicts in boards. Previous research on conflict in school boards is often solely focused on negative conflict dimensions within the board, such as 'destructive conflict' (Ford & Ihrke, 2017) or 'personalized disagreements' (Ford & Ihrke, 2016), which have a negative effect on the performance of schools and school boards. This creates the impression that conflicts in the governance of education should be avoided. Grissom thus states that: "Conflict reduction and conflict management appear to be important strategies for board success, particularly in complex decision contexts" (2014: 311). However, especially in complex decisions at the executive level, task conflicts are found to contribute to effective decision-making (De Wit, Greer, & Jehn, 2012; Heemskerk, Heemskerk, & Wats, 2015).

The findings in this study also indicate that reality is more complex. As suggested in Chapter 2, conflict is found to be a multidimensional concept and where relationship conflicts are indeed detrimental to the effectiveness of governance, substantive debate within the board contributes to its performance. In the context of Dutch supervisory boards in educational organisations, as expected, task conflict seems to have a positive effect and relationship conflict a negative effect, while process conflict seems to have no significant effect on a supervisory board's effectiveness. Different types of conflicts thus appear to behave differently. The fact that executive-board conflicts do not affect the effectiveness of supervisory boards – with the exception of the effect of process conflicts on the controlling task – seems to suggest that this dimension does not add much to the concept of conflicts.

At the same time, it also underscores how such executive-board conflicts behave differently compared to intraboard conflicts. That only process conflict between chairs of boards of executive directors and supervisory boards has a significant negative effect on a boards' controlling task execution fits the uncertainty within some Dutch supervisory boards in educational organisations on the role of the supervisory board and the demarcation of the responsibilities and tasks of the chair of the board of executive directors versus the supervisory board.

Personal conflicts among board members indeed appear to be triggered by process conflicts within a supervisory board, but, contrary to our expectations, task conflicts seem to have a dampening effect rather than a reinforcing effect on relationship conflicts. This gives supervisory boards in educational organisations even less reason to avoid substantive confrontations on the issues at hand. This mitigating effect of task conflicts on relationship conflicts is fully absorbed by the much stronger mitigating effect of cohesion within a board. This is in line with previous research on supervisory board behaviour that shows that task conflicts have a significant positive effect on cohesion within supervisory boards (Heemskerk, Heemskerk, & Wats, 2015). If board members feel comfortable with each other, an open and substantial discussion only further strengthens these mutual relationships.

The leadership style of the supervisory board chair is of great importance for the successful functioning of boards, both in their controlling and in their advisory task. Contrary to expectations, this positive effect of chair participative leadership appears not to be an indirect effect that runs through task conflict. Apparently, the positive effect of participative leadership goes beyond creating an optimal environment for constructive conflict. The role of the chair and the functioning of participative leadership in supervisory boards requires further research to gain insight into how it enhances board performance. It seems obvious to suppose participative leadership also has an impact on the two most important behavioural drivers of the effectiveness of teams: the use of knowledge and skills and the level of effort (Forbes & Milliken, 1999).

The fact that chair participative leadership has a limited triggering effect on relationship conflicts within a supervisory board is not unexpected. Participative leadership provides space to get input from several viewpoints on the table, but it can also cause or exacerbate tensions. It seems that this effect does not run so much through the task conflicts stimulated by participative leadership, which are found to have a limited and mainly damping effect. Supervisory board chair participative leadership does seem to trigger relationship conflict through the process conflicts it gives room to.

This research shows that conflict within a supervisory board is not an unambiguous matter and that more research is needed to clarify the dimensionality of conflicts in different governance contexts. The most important practical implication of this research is that relationship conflicts in boards do not arise due to strong substantive discussions. In fact, a good debate makes a board an even closer team. Supervisory boards in educational organisations should therefore not shun substantive discussions on the differences of opinion among their members.

A limitation of this study is that the chairs of the boards of directors in this study not only report on the dynamics within the supervisory board, but also on the dynamics between themselves and the supervisory board. This could possibly lead to self-report bias, especially when it comes to conflicts, for these are 'undesirable behaviours' that may result in socially desirable answers (Donaldson, & Grant-Vallone, 2002). This might have contributed to the non-significant results for executive-board conflicts on the effectiveness of supervisory boards. Future research should seek a response from both parties in the dynamics between executives and supervisors to avoid such self-report bias.

For future studies, it would also be interesting to see whether the conclusions found here for Dutch supervisory board governance in educational organisations also occur in other countries with other governance arrangements. In addition, the choice of a cross-sectional research design makes this study a snapshot. Chapters 4 and 5 will provide more insight into the dynamics of the relationship between conflicts and the effectiveness of supervisory boards in educational organisations through a longitudinal research design.

Table 5. Overview of findings in Chapter 3

	Hypotheses	Findings
1a	The effect of conflict on the task performance of supervisory boards in educational organisations will depend on the type of conflict.	Different dimensions of conflict indeed have different effects on task performance by supervisory boards in educational organisations.
1b	Task conflicts will have a positive effect, while process and relationship conflicts will have a negative effect. The effect of conflict between the executive directors and the supervisory board will be stronger for the controlling than for the advisory task.	Task conflicts have a positive effect, relationship conflicts have a negative effect but process conflicts have a small positive effect. The dimensionality of executive-board conflicts is not significant. Only executive-board process conflict has a small negative impact on the control task alone.
2	The effect of conflict on task performance in supervisory boards in educational organisations will be mediated through participative leadership by the chair of the supervisory board.	The effect of chair participative leadership on the performance of supervisory boards cannot be explained by interaction effects with the various dimensions of conflict. Only a small effect on the controlling task of supervisory boards is found for the interaction effect of chair participative leadership and executive-board relationship conflict.
3	Intraboard relationship conflicts will be triggered by task and process conflicts within a supervisory board in educational organisations.	Process conflict was indeed found to have a significant positive effect on the occurrence of relationship conflicts. Task conflicts on the other hand prevents, instead of triggers relationship conflicts.
4	The triggering effect of task conflict on relationship conflicts will be moderated by the level of cohesion within a supervisory board in educational organisations. The triggering effect will be stronger in less cohesive boards.	The mitigating effect of task conflict on relationship conflict was found to be significant in less-cohesive and insignificant in more-cohesive supervisory boards.
5	The effect of task and process conflict on relationship conflict will be moderated by the supervisory board chair's participative leadership. The triggering effect will be stronger in supervisory boards with chairs who offer less-participative leadership.	More participative chairs dampen some of the triggering effect of process conflict on relationship conflicts. The dampening effect of task conflict on relationship conflict is absent in boards with less participative chairs.

Note: green indicates support, orange indicates partial support, red indicates no support.

Chapter 4 The vice and virtue of conflict in boards

A longitudinal study into the effect of conflicts and cohesion on the task performance of supervisory boards in educational organisations

This chapter is an adaptation of Heemskerk, K. (2023): "The vice and virtue of conflict in boards: A longitudinal study into the effect of conflicts and cohesion on the task performance of supervisory school boards in the Netherlands", *European Journal of Education 58*(2), pp. 314–330.

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Introduction

The multidimensionality of conflict was confirmed in Chapter 3, demonstrating that, as expected, task conflict is positively and relationship conflict is negatively associated with the effectiveness of supervisory boards. Chapter 3 further unveils how cohesion plays an important role in preventing the derailing of task conflicts into relationship conflicts. In this chapter, the underlying dynamics in this are explored. This chapter marks one of the first research studies to examine conflicts and cohesion in supervisory boards longitudinally.

In recent years, schools have become more diverse, complex and autonomous (Waslander, Hooge, & Drewes, 2016). The transfer of responsibilities from national governments to individual educational institutions is an increasingly important feature of the reform of education governance in various countries (Pont, 2020; Theisens, Hooge, & Waslander, 2016). Chapter 1 has outlined how traditional governance models thus seem no longer tenable, for educational institutions have become too large and too complex (Heemskerk, Heemskerk, & Wats, 2015; Hooge & Honingh, 2014; Hooge, 2016).

As in many other areas within the semi-public sector, the governance of educational institutions is therefore modelled after the governance of private companies (Frumkin & Galaskiewicz, 2004; McDonald, 2016; Meyer, 2002). In the Netherlands, this resulted in most schools adopting a two-tier design with an executive board, which often consists of only one executive director, and a non-executive or supervisory board.

The assumption behind this process of organising boards or corporations is that a business-like organisation of the governance of public institutions will render these institutions more effective (Meyer, 2002; Wilks, 2007). Whether this assumption is justified remains an open question (Honingh, van Genugten, van Thiel, & Blom, 2020). Research on non-executive board effectiveness in the field of corporate governance suggests that the effectiveness of a board is not determined by its structure and composition, but rather it is the actual behaviour of the board members as a team (Huse, 2005; Leblanc, 2004; Pye & Pettigrew, 2005; Van Ees, Gabrielsson, & Huse, 2009).

In research on education governance, it is likewise becoming increasingly apparent that the steering required in school governance largely depends on the social dynamics within a school board and therefore the social dynamics in school boards are what determine the effectiveness of school boards (Ford & Ihrke, 2020; Loh, Unda, Gong, & Benati, 2021; Theisens, Hooge, & Waslander, 2016).

This behavioural turn in studies on boards of directors and school boards has yielded insights regarding a number of behavioural indicators of board effectiveness. Research into behavioural determinants of the effectiveness of boards – both in the corporate sector (e.g. Zona, 2016) and at educational institutions (e.g. Heemskerk, Heemskerk, & Wats, 2015) – has revealed the importance of apparent factors such as the extent to which board members are willing to invest their time and energy, and the presence and use of diverse knowledge and skills.

However, research on conflict within boards has provided less conclusive findings. While some point to the possible positive effect of differences of opinion and debate within the board (Forbes & Milliken, 1999), most researchers highlight the negative effects of disagreement and quarrel on the effectiveness of the board (Grissom, 2014). The meta-analysis of research on this topic in Chapter 2 revealed that while the efforts, norms and the use of knowledge within a board of directors have a clear effect on the effectiveness of a board, there is a lack of clarity about the impact of conflicts on the effectiveness of boards. Even when conflict is conceived as a substantial debate on the issues at hand, as task-related conflict, the impact appears to strongly differ across studies. For instance, the effect of conflicts on a boards' performance in carrying out tasks is sometimes found not significant (Zona & Zattoni, 2007), negative (Minichilli, Zattoni, Nielsen, & Huse, 2012) or positive (Bailey & Peck, 2011). Research on conflicts in boards thus seems to lack a comprehensive insight into the complex workings of conflicts in boards. Although Chapter 3 confirmed the multidimensional nature of conflicts and that the triggering of relationship conflicts by task conflicts is affected by the cohesiveness of a supervisory board.

An important unresolved question on board behaviour however, is how conflicts, cohesion and the performance of boards are interrelated. This chapter attempts to take a step further by departing from the research done so far on three aspects. First, studies that have been carried out on diversity and conflicts within boards are often limited to the negative effects of conflicts (Kaczmarek, Kimino, & Pye, 2012; Van Peteghem, Bruynseels, & Gaeremynck, 2018; Veltrop, Hermes, Postma, & de Haan, 2015). According to these studies, the necessary diversification in boards ought not take place at the expense of the harmony in a board. Boards that are free from conflicts and act as a cohesive group are in this view seen as optimally functioning boards, characterised by "superior decision-making" (Van Peteghem, Bruynseels, & Gaeremynck, 2018: 339). Studies focusing on school boards have likewise been preoccupied with the negative consequences of conflicts (Ford & Ihrke, 2017, 2016; Grissom, 2010, 2014; Land, 2002). These studies commonly recommend to avoid tensions and conflicts (Ford & Ihrke, 2017; Land, 2002). However, in order to be effective in monitoring and advising directors, boards must be able to engage in a robust discussion with different points of view and perspectives, which inevitably leads to a certain amount of tension among board members (De Dreu & Weingart, 2003; Heemskerk, Heemskerk, & Wats, 2017; Mooney, Holahan, & Amason, 2007; Simons & Peterson, 2000).

Second, research on conflicts in boards, tends to accord insufficient attention to the multi-dimensionality of conflicts. Conflicts, however, differ in nature and thus in effect as chapter 3 has demonstrated convincingly. Recognizing these differences in conflict makes it easier to distinguish adverse effects of conflict from potentially beneficial effects. In literature on team effectiveness, there is a consensus on a threefold classification of conflicts as: task conflicts, process conflicts and relationship conflicts (Jehn, 2014).

A third way in which this research departs from previous research on conflicts in boards is its longitudinal research design. Research on behavioural dynamics in supervisory boards is almost always based on singular measurements. This is problematic as one cannot capture motion and dynamics in the behaviour of boards in a momentary snapshot. As a result, the literature currently lacks studies on dynamics over time in supervisory boards in educational organisations. This is also a problem in the broader literature on team effectiveness, as noted by Kozlowski: "[…] the lack of attention to dynamics means that team process mechanisms are essentially unstudied" (2015: 270). The study on which this chapter reports is unique in that it does not statically assess the level of conflict and effectiveness at a single moment, but rather provides insight into the dynamics in conflict and effectiveness through repeated measurements over time.

School governance and effectiveness

Research on the effectiveness of boards in education varies in how it operationalises effectiveness. While some studies measure effectiveness primarily by examining the quality of education, others focus directly on the quality of a school board's task performance (Loh, Unda, Gong, & Benati, 2021). A well-functioning school board is important for an educational organisation. However, the effectiveness of a school board may not be readily apparent in the performance of the schools they govern—even as there are causal links between the governance of schools and these educational results. A recent systematic literature review on the relationship between educational quality and executive school boards, accordingly, reveals that there is hardly any empirical evidence to support the link between boards and educational quality (Honingh, Ruiter, & van Thiel, 2020).

This is even more true for a supervisory board since it is even more distanced from the day-to-day operations. Intuitively, it is not difficult to see that a supervisory board may excel in its task if the school is not performing well, and they work together with school executive leadership towards improvement. And vice versa, schools that perform well in terms of educational quality may have a board that operates at too great a distance, rendering it unable to act responsibly when a crisis occurs. Indeed, there is evidence that the relationship of supervisory boards is inverse: non-executive board members invest less in the quality of their own task performance when the organisation is doing well (Pugliese, Minichilli, & Zattoni, 2014).

Accordingly, task performance by the supervisory school board is in this study used as a measure of the board's effectiveness (Forbes & Milliken, 1999; Huse, 2005). Forbes and Milliken define board task performance as "the board's ability to perform its control and service task effectively” (Forbes & Milliken, 1999: 492). Classifications of board tasks vary in descriptions, numbers and nuances, and how one sees the tasks and roles of a board, strongly depends on one’s own theoretical premises. And as outlined in Chapter 1, this research aligns with Huse's (2005) approach to discern two major board tasks: advise and control. The control task of the supervisory board refers to its task to oversee management and act as the employer of the executive directors for school leadership, while the advisory task refers to their advising and guiding of the executive directors by virtue of their knowledge, expertise and networks.

The particular context of school governance in the Netherlands has already been discussed in more detail in Chapter 1. The Netherlands is exceptional in the extent to which schools are autonomous. Therefore, it provides a good case to further examine the consequences of greater autonomy of education institutions for the governance of schools (Hooge, 2016). The autonomous way in which supervisory boards in educational organisations are organised in the Netherlands requires boards even more to constantly balance between involvement and distance.

The search for this balance and thus the appropriate role for the board often creates some tension between the supervisory school board and the executive director. This balancing act in itself is not unique to the situation in the Netherlands, school boards in other governance contexts are likewise in search of a proper balance in the fulfilment of their roles. Mountford, for instance, suggests in her study on school board to superintendent relationships in the United States, that conflicts between the superintendent and board members are less a matter of searching for the right role, but mainly of “thwarted attempts at micromanaging” the superintendent (Mountford, 2004: 736). This kind of tension between boards and executives further underlines the relevance of a better understanding of how conflicts affect the effectiveness of supervisory boards.

The multidimensionality of conflicts

To adequately manage disagreements and conflicts within a board, it is important to understand when conflicts are detrimental to the effectiveness of the board and when they actually contribute to a better functioning of a board. The research on the effect of conflicts on the effectiveness of teams presented in Chapter 3 has revealed that conflict is not a monolithic concept. Different types of conflict have different effects on the effectiveness of teams in different contexts. The history of the classification of these different dimensions of conflict, as outlined by Jehn (2014), shows a tendency of a threefold distinction between task conflicts, process conflicts and relationship conflicts.

Task conflicts are focused on the content of the task to be performed, process conflicts are focused on how tasks should be performed, and relationship conflicts are caused by interpersonal incompatibilities that result in tension, hostility and annoyance among team members (Jehn, 1995, 1997). Figure 1 presents a multidimensional model of conflicts within a supervisory school board informed by the findings in Chapter 3. The effects of the different conflict dimensions on the task performance of the supervisory school board in this model are further outlined below in three hypotheses on the main effects.

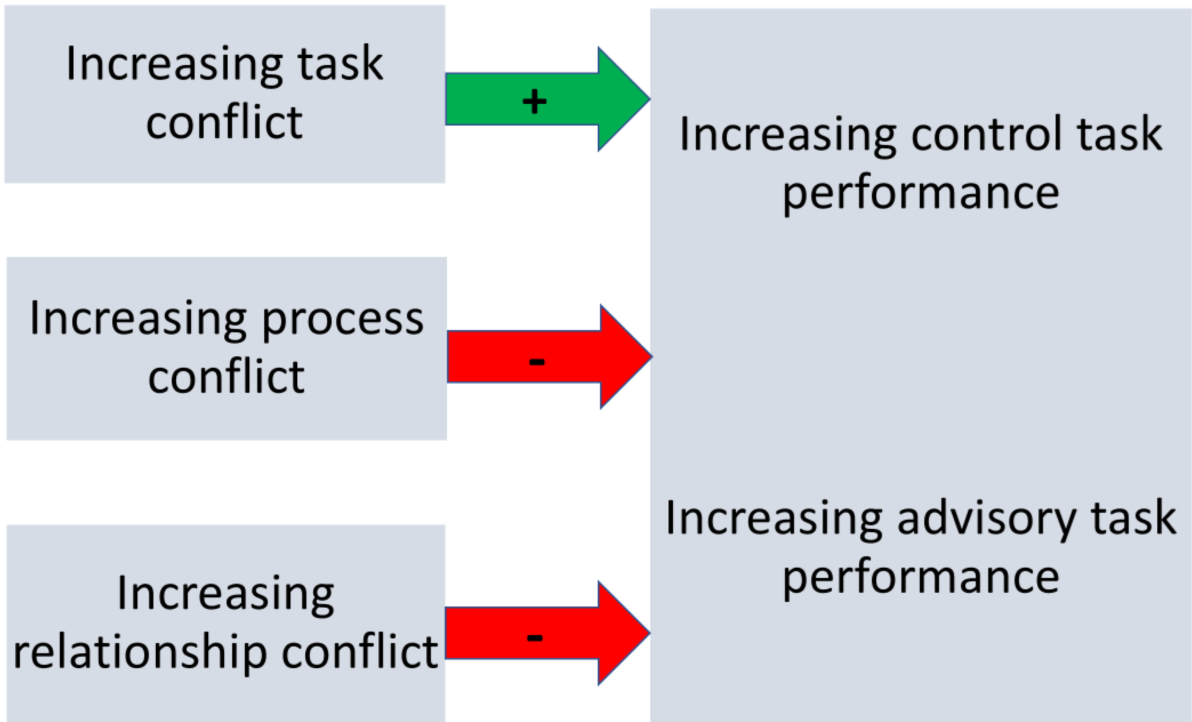


Figure 1. Multidimensional model of conflicts in boards

Task conflicts are considered crucial to improving the quality of board decision-making (Forbes & Milliken, 1999). Two meta-analyses of the research on conflicts in teams, however, provide a complex and nuanced picture of the relationship between conflict and team effectiveness (De Wit, Greer, & Jehn, 2012; O'Neill, Allen, & Hastings, 2013). Both analyses identified two important conditions in which task-specific conflicts have a more positive effect on the effectiveness of teams.

First, task conflicts tend to be more positive in strategic and complex decision-making than in routine tasks (O'Neill, Allen, & Hastings, 2013). Second, the effects of task conflicts are less negative or even more positive in teams that function higher up in the hierarchy of the organisation (De Wit, Greer, & Jehn, 2012). For instance, task conflicts are not productive on the assembly line of a beverage can factory, but they are useful in boards, since boards are mainly concerned with non-routine and complex decision-making at the top of the organisation.

An intriguing study on the downfall of a charter school in Florida paints a picture of how conflict is an important element of adequate school board behaviour. This study showed that a lack of engagement in task-related conflicts within the board appears to have ultimately ruined the school, for the school board "did not question the principal on many issues regarding the school operations and finances" (Karanxha, 2013: 600), and thus degenerated into a dysfunctional rubber-stamping board. Previous research into the behaviour of supervisory boards likewise suggests that task conflicts appear to have a positive effect on the task performance of boards (Heemskerk, Heemskerk, & Wats, 2015). The effectiveness of supervisory boards is associated with a comparatively greater number of instances of task conflicts.

On this background, the following three hypotheses are articulated. Two additional hypotheses are presented in the next section. Unlike previous studies, the hypotheses presented in this chapter does not rely on static concepts but on dynamic models. It does not examine the level of conflict at a given point in time but rather the increase in conflict over time.

Hypothesis 1. An increase in task conflicts leads to an increase in the performance of both the control and advisory tasks.

Process conflicts, on the other hand, generally have a negative effect on the effectiveness of teams, because members of the group are distracted from the execution of their tasks (De Wit, Greer, & Jehn, 2012; Margarida Passos & Caetano, 2005). Process conflict within a board usually concerns the organisation of the board itself (Who sits on which committee? How do we evaluate ourselves? What does the resignation schedule look like?). Process conflicts distract from the actual work, lead to procrastination and reluctance to participate, and encourage hostility leading to a negative attitude towards the board as a team (Behfar, Mannix, Peterson, & Trochim, 2011; De Wit, Greer, & Jehn, 2012; Jehn, 1997; Margarida Passos & Caetano, 2005). The negative effect of process conflicts appears to be even more negative in non-routine and complex decision-making, characteristics typical for the context of supervisory boards in educational organisations (Hamm-Kerwin & Doherty, 2010).

Hypothesis 2. An increase in process conflicts leads to a decrease in the performance of both the control and advisory tasks.

Relationship conflicts within a supervisory school board often arise from the incompatibility of personalities resulting in tension, hostility and annoyance among board members. Task and process conflicts, when not adequately handled, may cause and aggravate relationship conflicts, as discussions about who should do what easily degenerate into personal struggles and hostility within the supervisory board (De Dreu & Weingart, 2003; Greer, Jehn, & Mannix, 2008; Martínez-Moreno, Zornoza, González-Navarro, & Thompson, 2012; Mooney, Holahan, & Amason, 2007).

Hypothesis 3. An increase in relationship conflicts leads to a decrease in the performance of both the control and advisory tasks.

Cohesion as a moderating factor

The model presented in Figure 1 provides a comprehensive overview with three hypotheses about main effects. The model becomes more complex when the dynamic interaction with cohesion is added as a variable to the model. For a board to be effective in both the control and service task it requires the members to sense a shared responsibility for monitoring and advising the director. This requires a certain degree of cohesion within the board as a team. Cohesion within a team contributes to the active participation of the members and ensures more effective communication within a team (Casey-Campbell & Martens, 2009). The importance of cohesiveness and good relationships in schools and boards for the effectiveness of the decision making and governance of the organisation is often stressed in the literature on school governance (e.g. Hofman & Hofman, 2011).

The cohesion within the supervisory school board is also expected to have a moderating effect on the relationship between conflicts and the task performance of the board (Heemskerk, Heemskerk, & Wats, 2015). More cohesive teams seem to be better able to prevent the negative effects of differences of opinion on their task performance (Ensley, Pearson, & Amason, 2002). In a supervisory school board where cohesion is comparatively great, the negative effects of process and relationship conflicts can be considerably weaker, for greater cohesion shields against hostility and helps to prevent a negative attitude towards the team.

The research on the moderating effect of cohesion on the impact of conflicts on the performance of boards in Chapter 3 also suggests a dampening effect of cohesion on the emergence of relationship conflicts in supervisory boards in educational organisations. At the same time, task conflicts may have a more positive effect in boards where the cohesion further increases, as task conflicts prevent the emergence of group think, or excessive unanimity, within supervisory boards (Forbes & Milliken, 1999; Janis, 1982).

Hypothesis 4. The negative impact of process and relationship conflicts on the control and advisory task performance is more pronounced in supervisory boards in educational organisations where the cohesion within the board has decreased.

Hypothesis 5. The positive effect of task conflicts on the control and advisory task performance is more pronounced in supervisory boards in educational organisations where the cohesion within the board has increased.

Method

To test the hypotheses, the survey data, outlined in Chapter 1, was used for both 2016 and 2017. In 2016, 60% of the executive directors responded (N=300) and in 2017, 26% of the directors responded (N=130). At 21% of the educational organisations, the executive director completed the questionnaire in both 2016 and 2017 (N=103). For this chapter the control and advisory task performance are used as dependent variables, while cohesion and task conflict, process conflict and relationship conflict are used as independent variables. However, this study has a longitudinal approach and therefore the value of these variables was not assessed for 2016 or 2017, but rather the increase in these variables between 2016 and 2017 was considered. The increase for the dependent and independent variables was calculated by subtracting the 2016 average per organisation from the 2017 average score. A negative score for the increase of a variable thus indicates a decrease in 2017 as compared to a 2016.

Table 1. Number of survey items, mean and reliability statistics of the measurements in 2016 and 2017 and the increase between 2016 and 2017.

	Number of items	2016 Mean	2016 Alpha	2017 Mean	2017 Alpha	Increase Mean[a]
Control task performance	8	5,28	0,86	5,12	0,83	-0,20
Advisory task performance	9	4,58	0,90	4,37	0,91	-0,41
Cohesion	6	5,56	0,88	5,49	0,84	-0,12
Number of schools				13,36		
Change of principal				0,077		
Tenure of principal	1			6,07		
Frequency of meetings	1	6,00		5,99		-0,04
Task conflicts	2	5,53	0,83	5,50	0,82	-0,16
Process conflicts	3	1,87	0,70	1,86	0,45	0,06
Relationship conflicts	4	1,86	0,90	1,97	0,92	0,15

Note: [a]The increase between 2016 and 2017 has been calculated at the individual level by subtracting the value for 2016 from the value for 2017 for the 103 organizations that were part of the sample in both 2016 and 2017.

The analyses were controlled for four factors. First, the size of the educational organisation could have a distorting effect: larger organisations face more complex strategic challenges. The issues of an educational organisation’s supervisory school board that oversees only one school is different from the challenges of a board with responsibility for more than 40 schools. The number of schools under a supervisory school board in 2017 was therefore included as a control variable. Second, a new executive director was appointed at a number of organisations between 2016 and 2017. As a respondent, a new director can have a different perspective on the functioning of the school board, so the switch in executive director has been included as a dummy control variable. Likewise, the term of office of the executive board member can have an influence on how they view the task performance of the supervisory school board.

Furthermore, a director's long term of office seems to be linked to a certain dominance of the director over the board (Hermalin & Weisbach, 1991). The tenure of the executive director was therefore included as a third control variable in the analyses. The final control variable is the frequency of meetings of the supervisory school board, as it is generally assumed that the frequency of meetings is positively related to the board's task performance (Heemskerk, Heemskerk, & Wats, 2015). An overview of all variables can be found in Table 1. Table 2 shows the mean, the number of cases, the standard deviation and the correlations between all variables.

Results

Table 1 reveals that the levels of both control and advisory task performance by supervisory boards in educational organisations have declined in 2017. However, the differences between educational organisations are considerable, as is evident from the standard deviations in Table 2. The correlations in Table 2 further support the first three hypotheses, except that, contrary to hypothesis 2, there does not seem to be a relationship between the increase in process conflicts and the increase in the control task performance of supervisory boards.

To test the hypotheses, hierarchical multiple regression analyses were performed on the dependent variables—the increase in control task performance and the increase in advisory task performance—with three models. Model 0 contains only the control variables: the number of schools within the organisation, executive director turnover, executive director's term of office and the frequency of supervisory school board meetings. Then, in model 1, the three different dimensions of conflicts in the board: task conflicts, process conflicts and relationship conflicts, have been added to the analysis. In model 2, cohesion is added to the analysis. The results of the regression analyses are shown in Table 3.

Table 3. Hierarchical regression analysis

	Model 0		Model 1		Model 2	
	Increasing control	Increasing advise	Increasing control	Increasing advise	Increasing control	Increasing advise
Number of schools	.065	.187†	.053	.154	.059	.157
Change of principal	-.108	.020	-.084	.052	-.094	.046
Tenure of principal	-.055	.052	-.082	.032	-.074	.036
Frequency of meetings	.091	.108	.096	.100	.111	.108
Increas. task conflict			.340**	.311**	.213*	.241*
Increas. process conflict			.126	-.195†	.149	-.183†
Increas. relationship conflict			-.212†	-.087	-.084	-.016
Increas. cohesion					.337**	.186
Adj. $\overline{R}^2$	-.016	.012	.142	.162	.209	.176

Note: *p < .05; **p < .01; †p < .1

The control model appears to have little explanatory value for both the control and advisory task performance. The number of schools within the organisation seems to be the only variable associated with the board's advisory task performance. The inclusion of the conflict dimension does, however, lead to a significant increase in the explanatory value for the control task performance (R^2 = 0,14) and the advisory task performance (R^2 = 0,16).

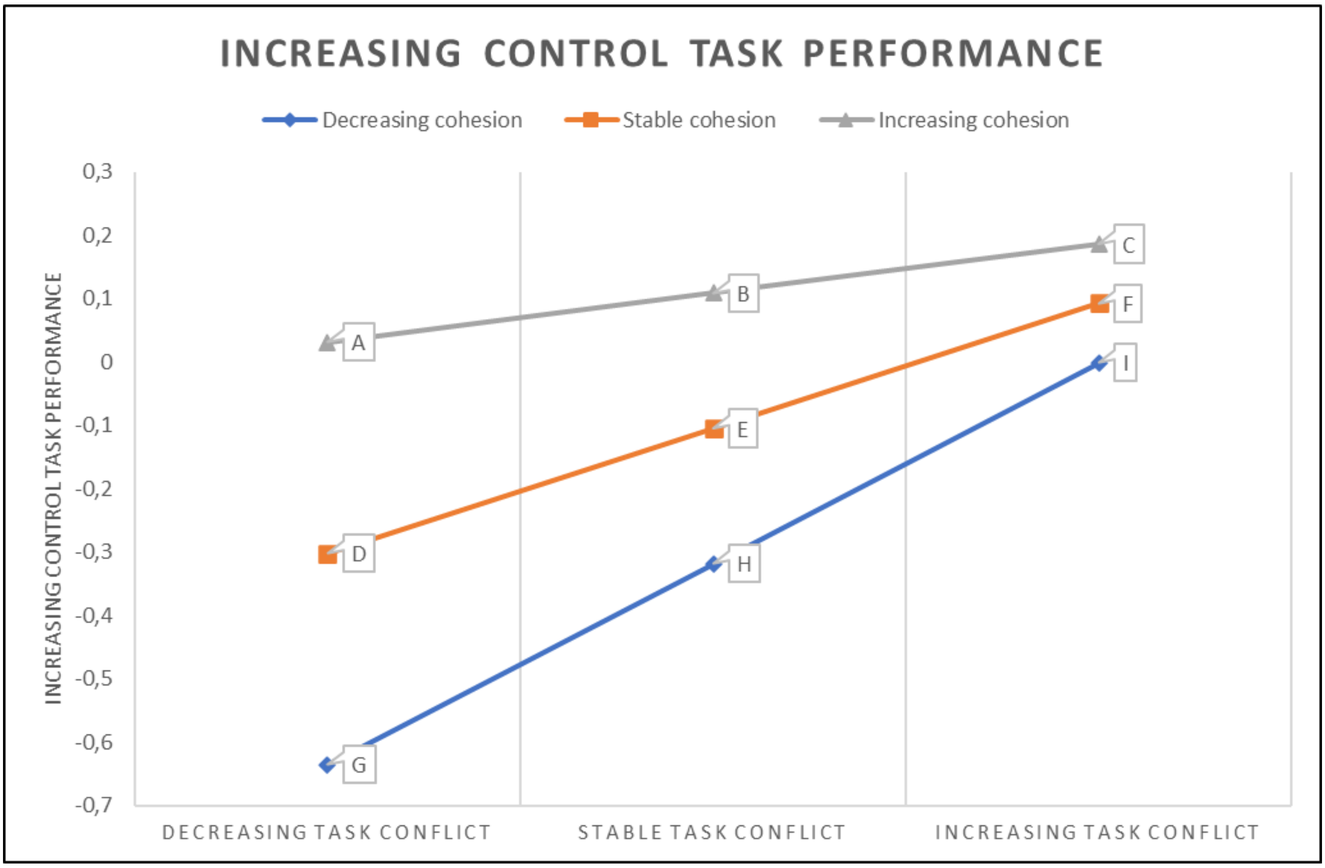
In line with hypothesis 1, the effect of the increase in task conflicts is significant for both the control and the advisory task performance. For hypotheses 2 and 3, it is a bit more complicated, since the increase in relationship conflicts only has a limited negative effect (β_{st} = -0.212; α < 0.10) on the control task performance and no effect on the advisory task performance, while the opposite is true for the increase in process conflicts: it has a limited negative effect (β_{st} = -0.195; α < 0.10) on the advisory task performance, but no effect on the control task performance.

It is notable that the inclusion of the increase in cohesion in model 2 does affect the control task performance (β_{st} = 0.337; α < 0.01) but does not affect the advisory task performance. Furthermore, this positive effect of the increase in cohesion seems to counteract the negative impact of relationship conflicts. Apparently, cohesion here indeed behaves as a moderator on the effect of conflict on the control task performance.

To further test the assumption in hypotheses 4 and 5, that conflict dimensions behave differently in an environment with increasing or decreasing cohesion, hierarchical regression analyses were performed with the control and advisory task as a dependent variable; and the conflict dimensions and cohesion as independent variables; whereby, in each case, the interaction term of these different conflict dimensions and cohesion was added as an independent variable. These interaction terms were significant for the effect of task conflict and relationship conflict on the control task performance only. Subsequently, through the PROCESS macro version 3.2.01 (Hayes, 2013), data was generated to visualise this moderating effect of both conflict dimensions and cohesion on the control task performance of school boards. The charts illustrating these moderating effects are presented in Figure 2 and Figure 3.

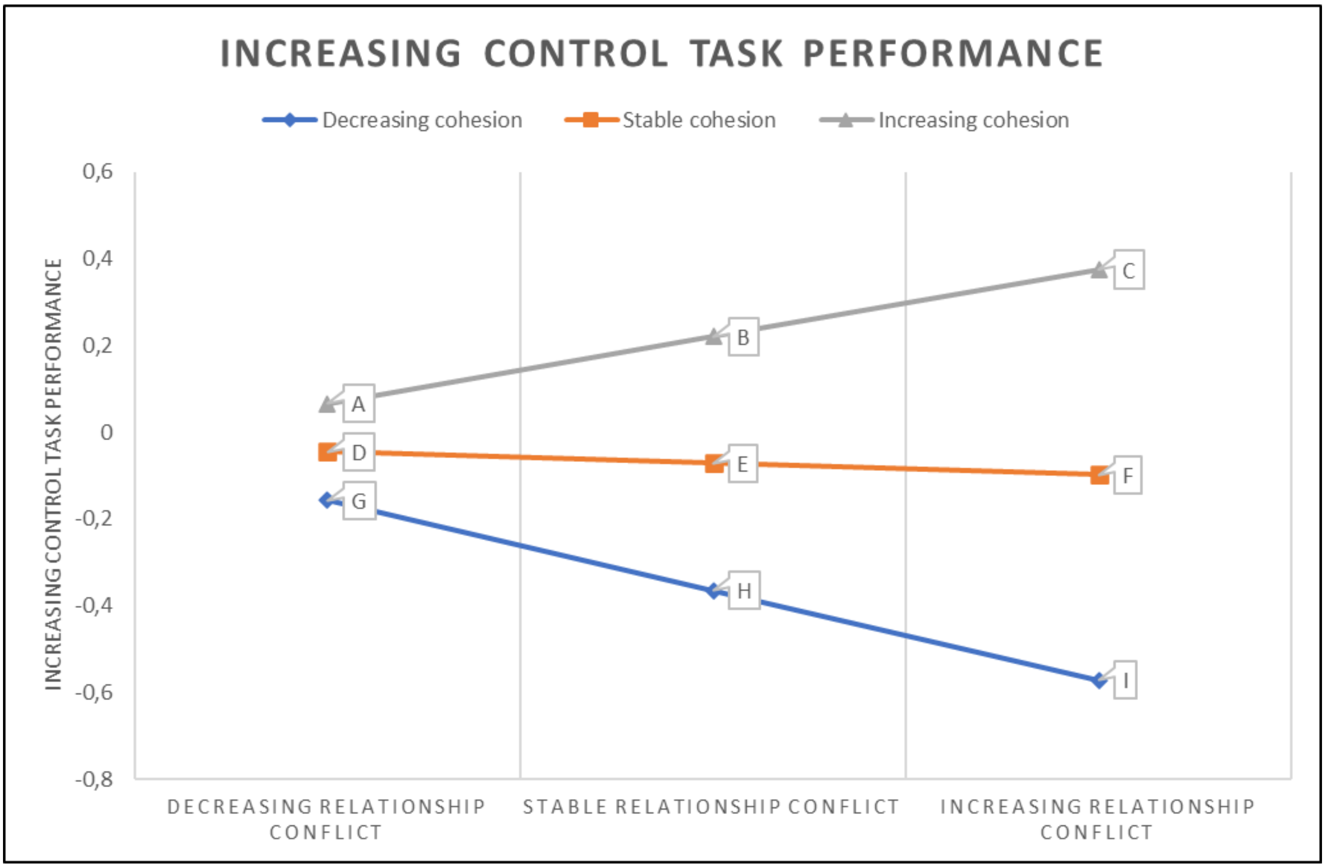
Figure 2 reveals that the interaction effect of task conflict and cohesion is much more pronounced when task conflicts decrease. When task conflicts increase, the difference between decreasing (I), stable (F) and increasing (C) cohesion seems to matter less. However, when task conflicts decrease, the extent to which this is detrimental to the control task performance depends heavily on the cohesion within a supervisory school board. If cohesion increases in the meantime, the interaction effect is almost zero (A), but if cohesion remains the same (D) and especially if cohesion decreases, the effect of a decrease in task conflicts is more pronounced (G). In such a context, a team appears to be almost disintegrating—there is less and less room for differences of opinion and, at the same time, there is less and less mutual cohesion within the board.

It is true that the effect of task conflict is stronger when cohesion in a supervisory school board has increased as well and in this sense the findings are in line with the assumption in hypothesis 5. Meanwhile, Figure 2 warns boards to be seriously concerned about control task performance, when the cohesion and the task conflict both show a declining trend (G). If board members no longer get along with each other and, to keep the peace, avoid substantive discussions, the board obviously loses its effectiveness as a supervisory body.



	Task conflict	Cohesion	Increasing Control
A	Decreasing	Increasing	.031
B	Stable	Increasing	.109
C	Increasing	Increasing	.186
D	Decreasing	Stable	-.302
E	Stable	Stable	-.105
F	Increasing	Stable	.093
G	Decreasing	Decreasing	-.635
H	Stable	Decreasing	-.318
I	Increasing	Decreasing	-.001

Figure 2. Illustration of the moderating impact of cohesion on the effect of task conflict on the increase in control task performance



	Relationship conflict	Cohesion	Increasing Control
A	Decreasing	Increasing	.066
B	Stable	Increasing	.220
C	Increasing	Increasing	.374
D	Decreasing	Stable	-.046
E	Stable	Stable	-.072
F	Increasing	Stable	-.098
G	Decreasing	Decreasing	-.157
H	Stable	Decreasing	-.364
I	Increasing	Decreasing	-.571

Figure 3. Illustration of the moderating impact of cohesion on the effect of relationship conflict on the increase in control task performance.

At best, a supervisory school board is able to increase both task conflicts and cohesion within the board. Previous research shows that these two can mutually reinforce one another (Heemskerk, Heemskerk, & Wats, 2015). If members of a board get on well with each other, a firm debate on the issues at hand will only strengthen their bond.

Interestingly, the interaction with cohesion as a moderator changes the direction of the effect of relationship conflicts, as shown in Figure 3. For supervisory boards in educational organisations with increasing relationship conflicts, the interaction effect of relationship conflicts and cohesion is the opposite of that for decreasing relationship conflicts. In line with the expectations in Hypothesis 4, relationship conflict is more detrimental to the control task performance of boards when cohesion decreases. Where relationship conflicts decrease, there is not such a profound difference in the contexts of increasing (A), stable (D) or decreasing (G) cohesion. Although in the latter two cases, the control task performance is affected negatively, while in the context of increasing cohesion the decrease in relationship conflicts is associated with an increase in control task performance.

This means that a reduction of relationship conflicts is not necessarily a good sign. Less internal friction and animosity is only beneficial for the control task performance if it is accompanied with an increase in cohesion among board members. Less arguing and at the same time a stable, or worse, decreasing internal cohesiveness seemingly results only in poorer performance by a supervisory school board. The decrease or absence of relationship conflict is therefore not necessarily linked to an optimal control task performance. This is in line with previous research into boards of directors (Heemskerk, Heemskerk, & Wats, 2017) and, as Eisenhardt and others in their research on conflict and effectiveness in management teams have described it: “the absence of conflict is not harmony, it’s apathy” (1997: 77).

The interwovenness of cohesion and conflict is also reflected in the pronounced effect that cohesion as a moderator has on the effect of an increase in relationship conflict on the control task performance. More relationship conflict is harmful when the cohesion within a supervisory school board diminishes (I) or remains the same (F), but when the cohesion increases, more relationship conflict actually positively affects the control task performance (C).

This sheds new light on our understanding of the negative effect of relationship conflict on control task performance shown by the regression analyses (Table 3). This also explains in part why this negative effect disappears when cohesion is added to the regression model. A supervisory school board will perform better if it is able to combine an increase in interpersonal conflicts with an increase in cohesiveness within the board.

For example, tensions over investment in a new school building can run high in a supervisory school board and even lead to friction and personal clashes. However, if the board can prevent these tensions from damaging the cohesiveness of the board, and even increase the cohesion within the board, these conflicts will only enhance the supervisory school board's ability to carry out its control task effectively. This is a balancing act since an increase in relational conflicts is negatively related to an increase in cohesion, as can be seen from the correlation in Table 2 and was also demonstrated by the findings in Chapter 3.

However, a supervisory school board where cohesion has increased, to such an extent that the danger of groupthink is imminent, can benefit from the corrective effect of relationship conflicts in order to evade tunnel vision (Janis, 1982). For example, a new board member with a more critical view can cause a lot of irritation and quarrels, while at the same time allowing for sharper discussion of the topics at hand and thus enabling the board to be more effective in the control of their executive director. These results, therefore, do not justify a one-sided advice to solely focus on strengthening the cohesion within a supervisory school board.

Discussion

The research on which this chapter reports responds to a call for the use of longitudinal research designs in the study of behavioural indicators for effectiveness of boards (Van Ees, Gabrielsson, &

Huse, 2009). Through repeated measurement the dynamics of conflict, cohesion and effectiveness, more insight has been gained into how these aspects are interrelated.

While previous research appears to be preoccupied by the negative aspects of conflicts in boards, this study indicates the potential for conflicts to have a positive effect on the effectiveness of supervisory boards (Ford & Ihrke, 2020). An increase in task conflict within a board turns out to be positive for both the advisory and the control task performance, while this does not threaten the cohesiveness within the board. Moreover, the mutual cohesion appears to be strengthened when task conflict intensifies. This highlights the importance of acknowledging the multidimensionality of conflicts in research on conflicts and the effectiveness of boards. It also explains why the findings in previous research may sometimes appear to contradict one another (Ford & Ihrke, 2020).

After all, task conflicts, relationship conflicts and process conflicts have a different effect on task performance as was apparent from Chapter 3. While task conflicts have a positive effect on both controlling and advisory task performance, the increase in relationship conflict only has a negative effect on control task performance, while more process conflict leads to a decrease in the advisory task performance.

Growing interpersonal friction is mainly a threat to the sense of shared responsibility for the monitoring of the executive director or school leader. It clearly becomes more difficult to actively supervise, when one can no longer get along so well with one another. A divided supervisory school board is dysfunctional. This appears to be less relevant for the advisory task performance, as in practice, that task is often carried out less as a collective task but is more based on the individual expertise of the individual board members. Consequently, an increase in process conflict has a negative effect on the advisory task performance. When there is disagreement about who should do what, it gets more difficult to adequately use the individual expertise of the supervisory school board to advise school leadership. However, the effects of both the increase in relationship- and process-conflicts seems limited and further research is needed to confirm and explain this difference in impact.

Remarkably, the effect that an increase in relationship conflicts in supervisory boards in educational organisations had on the control task performance depended to a great extent on the cohesion within the board. In boards where cohesion is decreasing, more relationship conflict seems to be much more detrimental. Personal battles between members of the board in a context of increasingly less unanimous and unified working practices are apparently devastating for the control task of the board.

At the same time, this is not a recommendation to invest in maximising cohesiveness within the board per se, since increasing cohesion might lead to group think, which undermines the positive effect of task conflicts. Group think arises when supervisors feel so deeply involved in the board as a team that, in their pursuit of unity and harmony, they lose the ability to critically examine proposals and discuss alternatives (Hogg & Hains, 1998; Janis, 1982). Increasing cohesion within a team is an important signal for the emergence of group thinking (Park, 2000). This may explain the positive effect of increasing relationship conflicts in the context of increasing cohesion, for the increase in relationship conflicts may signal the ability of supervisory school board members to consider alternatives in the face of an overly cohesive climate – which inevitably causes some irritations.

In their research into the ways in which financial risks were managed during the credit crisis in British firms, McNulty and colleagues (2013) found that a high degree of social cohesion within a board in some cases prevented the positive effect of task conflicts. In contrast, other researchers have identified a positive relationship between cohesion and the effect of task conflicts in boards (Heemskerk, Heemskerk, & Wats, 2015; Park, 2000; Westphal & Bednar, 2005). The relationship between cohesion, conflicts and the task performance of boards is more complex and perhaps more context-dependent than expected. Forbes and Milliken (1999) may have a point when they suggested an inverse U-shaped relationship between cohesion and the task performance of boards of directors. Further research in different contexts is needed to gain a better understanding of the contextual dynamics and the interaction between cohesion and conflicts.

In this regard, board governance remains a balancing act between an overly cohesive team in which there is no room for disagreement and a constantly tense situation in which the board member's performance is hampered by ongoing interpersonal friction. Supervisory boards in educational organisations are therefore well-advised not only to invest in maintaining good interpersonal relations within their board, but above all to make room for substantive debate and even for the inevitable friction and irritation that is sometimes inherent in effectively monitoring the executive director.

The study on which this article reports has some limitations. First of all, the Dutch context is characterised by very autonomous schools and the two-tier design of school governance. Honingh and others (Honingh, Ruiter, & van Thiel, 2020) have outlined the diversity of school board structures across countries and how this may influence research findings. Future research should therefore explore whether the findings in this study are generalisable to other governance contexts with differently constituted (supervisory) school boards.

Second, in this study the executive director, or school leader, was represented by a single respondent. Although the meta-analysis in Chapter 2 found no distorting effect of relying on a single respondent in research on boards (future research would benefit from directly surveying supervisory board members, to further triangulate the executive director's response. Also, observation-based research would greatly enhance this field of research, but remains limited (see for an example Heemskerk, Heemskerk, & Wats, 2017).

Finally, the research on which this chapter reports was limited to a two-year time frame. Future research could expand a longitudinal study of boards over several years, to better understand the robustness of the relationship between conflict, cohesion, and effectiveness in supervisory boards. Chapter 5 proceeds along these lines by exploring the dynamics in the relationship between conflict dimensions and cohesiveness in supervisory boards in educational organisations from three points of measurement.

Table 4. Overview of findings in Chapter 4

	Hypotheses		Findings
1	An increase in task conflicts leads to an increase in the performance of both the control and advisory tasks.		The increase in task conflicts has a positive effect on both the control and the advisory task performance.
2	An increase in process conflicts leads to a decrease in the performance of both the control and advisory tasks.		The increase in process conflicts has a negative effect on the advisory task performance, but no effect on the control task performance.
3	An increase in relationship conflicts leads to a decrease in the performance of both the control and advisory tasks.		The increase in relationship conflicts has a negative effect on the control task performance, but no effect on the advisory task performance.
4	The negative impact of process and relationship conflicts on the control and advisory task performance is more pronounced in supervisory boards in educational organisations where the cohesion within the board has decreased.		Relationship conflict is more detrimental to the control task performance of boards when cohesion decreases.
5	The positive effect of task conflicts on the control and advisory task performance is more pronounced in supervisory boards in educational organisations where the cohesion within the board has increased.		The interaction effect of task conflict and cohesion is much more pronounced when task conflicts decrease. When task conflicts decrease, the extent to which this is detrimental to the control task performance depends heavily on the cohesion within a supervisory school board.

Note: green indicates support, orange indicates partial support, red indicates no support.

Chapter 5 Beyond the black box

Conflict profiles as drivers of the performance of supervisory boards in educational organisations

This chapter is an adaptation of Heemskerk, K. “Beyond the black box: Conflict profiles as drivers of board performance”. Under review in: *Corporate Governance: An International Review*.

Introduction: The behavioural turn in corporate governance

The preceding chapters have demonstrated how behaviour matters for the effectiveness of boards. The crucial question what drives board performance has puzzled governance scholars for decades. A sizable part of the literature looks at what Finkelstein and Mooney have dubbed the 'usual suspects', such as the number of outsiders on boards, board size, and CEO duality (Finkelstein & Mooney, 2003). However, this research has yielded limited results. The conclusion in this strand of literature is discouraging: "[…] no formula exists for the best board for a given firm" (Garner, Kim, & Yong Kim, 2017: 1195). In response to these meagre results another strand of governance literature turned to the behavioural study of boards and corporate governance (Huse, 2005; Leblanc, 2004; Pye & Pettigrew, 2005; Van Ees, Gabrielsson, & Huse, 2009). The previous chapters of this thesis represent contributions to this stream of research looking at the effectiveness of supervisory boards using behavioural indicators like conflict or cohesion.

Yet, as Chapter 4 illustrates the Forbes and Milliken's model of board behaviour cannot fully do justice to the complex interplay of behavioural factors and effectiveness within boards as teams. To further advance the behavioural research on boards, it is thus vital to establish a conceptual framework in which all the diverse aspects of board behaviour - from participative leadership to the triggering of relationship conflicts - can find their place and can be pieced together to obtain a more comprehensive understanding of the behavioural components of board effectiveness. The two most appealing attempts are the sketch of an behavioural theory of boards and corporate governance based on Cyert and March (1963) drawn by Van Ees, Gabrielsson and Huse (2009) and Westphal and Zajac's (2013) behavioural theory of corporate governance based on mechanisms of socially situated and socially constituted agency.

From Van Ees and others (2009) we learn that agency theory's rational actor model is inadequate for describing the actual decision-making within boards. Behavioural studies of boards demonstrate the complexity of the decision making process: "The starting point for many of these studies is the observation that the contradictory findings in mainstream governance research can be attributed to the complexities of board decision making" (Van Ees, Gabrielsson, & Huse, 2009: 310). Following Cyert and March's behavioural theory of the firm, they point to bounded rationality, satisficing behaviour, routinization of heuristic decision-making practices and political bargaining within boards of directors to refute the over-rationalized and over-simplified view of board directors in agency theory.

Westphal and Zajac (2013) convincingly argue that the micro-level of individual directors behaviour is always embedded within the macro-level social world. We therefore not only need to leave the rational actor model of the agency theory behind us, but also bid farewell to the methodological individualism which lies at its base. The doctrine of methodological individualism asserts that "[…] all social phenomena (their structure and their change) are in principle explicable only in terms of individuals - their properties, goals, and beliefs" (Elster, 1982: 453). Westphal and Zajac deem this reductionist presumption unacceptable and advocate a de-emphasizing of the divide between the individual and the social, since they place individuals in 'a socially situated and socially constituted world' (2013: 609).

The most manifest 'socially situated and socially constituted world' for directors is the board of the firm they serve. A social world in which the interdependencies and embeddedness of individual actors complicate the link between micro-level behaviour and macro-level outcomes. To further develop a behavioural theory of boards it is therefore essential to combine the focus on decision-making as non-rational team behaviour, as set forth by Van Ees and others, with Westphal and Zajac's focus on the interwovenness of micro-foundations and macro level outcomes.

Boards of directors should not be understood as sets of independently behaving individuals - they are a tangle of changing and evolving interactions. As Khurana and Pick set forth: "The actions of a board, therefore, cannot be understood as being the aggregate product of each individual director's behaviour" (2005: 1260-1261). To understand boards of directors effectiveness we rather need to conceptualize boards as social groups (Gabrielsson & Huse, 2004).

The modelling of boards of directors as decision making groups or teams by Forbes and Milliken (1999) has brought a significant expansion and enrichment to our understanding of how boards actually work, as the previous chapters have shown. Forbes and Milliken sought to understand the processes and behaviours involved in effective board performance. To do so, they saw a need to go beyond the demography-outcome approach and to incorporate the study of process-variables in the study of boards of directors in order to disentangle the predictions offered by multiple theoretical perspectives with regard to board demography.

The literature on boards, however, typically views boards as a collection of individuals with their own areas of expertise and their own backgrounds (Brennan, 2022; Vandewaerde, Voordeckers, Lambrechts, & Bammens, 2011). In the past few decades, however, research has demonstrated that boards are teams rather than groups of loosely connected individuals, since they possess several key characteristics that define a team (Adams, Hermalin, & Weisbach, 2010; Conger & Lawler, 2009; Forbes & Milliken, 1999). First, they have a common goal or mission, which is to oversee and coach the organisation toward success (Kozlowski & Bell, 2003). Second, they possess an interdependence, in which – although each member contributes their unique skills, perspectives and experiences – the team as a whole relies on each other to make decisions (Kozlowski & Bell, 2003). Third, they exchange ideas, information and viewpoints to reach the best possible decisions (Edmondson, 1999). Finally and most importantly, boards can be understood as teams because they are engaged in the joint pursuit of goals, which is generally considered a sine qua non for teams (Forsyth, 2010: 353).

Boards as a team are nevertheless a special kind of team: their output is purely cognitive and they meet only a few times a year, which, compared to teams that meet more regularly, gives them few opportunities to resolve disagreements (Forbes & Milliken, 1999; Heemskerk, Heemskerk, & Wats, 2017). Conflict within boards is therefore typically considered a negative aspect of board dynamics (De Dreu & Weingart, 2003; Heemskerk, Heemskerk, & Wats, 2017). Yet, as Chapters 3 and 4 demonstrated, conflict can also contribute to a team's effectiveness. Conflict can positively affect performance by helping to prevent bias and short-sightedness in group decision-making through the critical evaluation of ideas and proposals (Forbes & Milliken, 1999; Jehn, 1995). It also has a beneficial impact on team member engagement and contentment since conflicts allow team members to articulate their own perspectives and input (Simons & Peterson, 2000).

This potentially valuable benefit of conflicts for the performance of boards has given rise to an growing concern for the working of conflicts in research on boards (Eirola, Bezemer, & Reinhold, 2024; Engbers & Khapova, 2024). From Chapter 2, we have learned that research into task conflicts and board effectiveness display a high degree of heterogeneity. Similarly, the broader literature on conflict in teams shows a lack of clarity regarding the role of conflicts in team effectiveness (Cronin & Bezrukova, 2019; De Wit, Greer, & Jehn, 2012; O'Neill, Allen, & Hastings, 2013).

Chapter 3 highlights the importance of recognising the multidimensionality of conflicts in this regard. The findings of Chapter 3 reveal that in the context of supervisory boards in educational organisations, task conflict has a positive and relationship conflict a negative effect on the task performance, whilst process conflict unexpectedly has a positive effect on the advisory task performance. Chapter 4 elaborates on this by dynamically examining these effects. It reveals how increasing task conflict contributes to the task performance of a board while increasing relationship conflict is detrimental to its control task performance. Increasing process conflicts, however, are now found to have a negative impact on the advisory task performance of a board.

Chapters 3 and 4 also illustrate the importance of factors such as the cohesion within a board and the behaviour of the chair of the board in the question if and when conflicts are beneficial or detrimental to the effectiveness of boards. An obvious explanation for this lack of clarity is the absence of an adequate approach to the complexity and dynamics of conflict in teams (Cronin & Bezrukova, 2019; O’Neill, McLarnon, Hoffart, Woodley, & Allen, 2018; Okhuysen & Richardson, 2007). A recent review of the literature on boardroom dissent also highlight how boardroom dissent is a socially complex and dynamic process that calls for alternative research methods to advance our understanding of conflict in boards (Eirola, Bezemer, & Reinhold, 2024).

To take the research on conflict in boards a step further, this chapter aligns with the research of O'Neill and others (2018) that introduced conflict profiles in teams as emergent states. Conflict profiles are configurations of the different conflict dimensions within a team. The approach to conflict in boards through conflict profiles serves to better reflect the dynamics of conflict within boards by exploring in longitudinal research how shifts in these conflict profiles in boards are linked to the task performance of boards.

As a review of the literature on the dynamics of conflict in teams noted: "adopting a more dynamic perspective can rectify a lot of persistent problems within the conflict literature regarding what makes conflict functional" (Cronin & Bezrukova, 2019: 771). This research thus seeks to move beyond the clichéd metaphor of 'opening the black box' of the inner working of boards by paying due regard to the complex interdependence of conflict dimensions, cohesion and performance through a focus on the conflict profiles in supervisory boards in educational organisations and through exploring in longitudinal research what causes boards to switch conflict profiles.

The next section outlines the theoretical backdrop wherein, from the complexity perspective on teams, three research questions are raised regarding the functioning of conflicts in supervisory boards in educational organisations. Next, in the method section, the data collection, the measurement instruments and the analyses are set forth. In the results section, the main results are that boards display the same conflict profiles as found previously in other teams, whereas conflict profiles seen as dysfunctional in other teams can actually be functional in supervisory boards in educational organisations.

Unlike assumed, conflict profiles in boards are far from stable. Boards can avoid drifting into a less effective conflict profile through investing in conflict management. By enhancing cohesiveness, a board increases its chance of transitioning towards a more effective conflict profile. The discussion and limitations section further elaborates on the implications of these findings for future research and practice.

Theoretical background

The first step in solving the puzzle of conflict and effectiveness in teams is acknowledging the multi-dimensional nature of conflicts. Chapter 3 argued that it is important to comprehend conflict as a multi-dimensional construct in which the various dimensions of conflict are interrelated and interfere with each other to do justice to the complex interdependencies within the relation between team processes and performance. A classification of conflict into three dimensions based on the impetus of conflict is most common (Jehn, 2014). This threefold classification introduced in Chapter 1 distinguishes between task conflict, process conflict and relationship conflict.

Conflict not only has multiple dimensions, but these dimensions of conflict are also interrelated. Task conflict, for example, appears to have a more positive effect on team effectiveness when negatively correlated with relationship conflict (De Wit, Greer, & Jehn, 2012). It also is often assumed that task conflict and process conflict "trigger" the emergence of relationship conflict in teams (Greer, Jehn, & Mannix, 2008; Martínez-Moreno, Zornoza, González-Navarro, & Thompson, 2012). Chapter 3 explored this further and found that this triggering effect appears to be more strongly the case for process conflict rather than for task conflict.

This interrelatedness of conflict dimensions calls for a departure from the common approach adopted in research on the social determinants of board effectiveness. An all too common metaphor within the management research on the effectiveness of boards of directors is 'opening the black box' (e.g. Leblanc & Schwartz, 2007; Neill & Dulewicz, 2010; Zattoni & Pugliese, 2019; Zona & Zattoni, 2007). Researchers in using this metaphor aim to steer away from the agency-informed input-output model to gain insight into the processes that take place in between those two. In this line of research, the limited black boxes of input-output models are being replaced by Input-Process-Output models (IPO-models).

Within the board effectiveness literature, these systematic IPO-models of team effectiveness provided a great tool for exploring behavioural processes and effectiveness of boards as they add to the oversimplified input-output study of boards the intermediating effect of board processes (Bezemer, Pugliese, Nicholson, & Zattoni, 2023; Hackman & Morris, 1975).

The main limitation of this black box metaphor and the IPO-models of boards used, is that what actually takes place in these black boxes is far more complicated than the one-dimensional causal relationships between board processes and board outcomes that are commonly hypothesized in research making use of IPO-models. In three respects, reality in boards is more complicated than is assumed by these IPO-models. First, these models simplify the complex interdependencies within the relation between team processes and performance (Ilgen, Hollenbeck, Johnson, & Jundt, 2005). The relation between processes and outcomes rarely is a straightforward causal relationship; moreover, various different factors herein have a mediating effect.

Secondly, they disregard the concept of emergence in social dynamics since not everything that is termed a process is in fact a process, but rather a changing team characteristic or 'emergent state' (Marks, Mathieu, & Zaccaro, 2001). From the rapidly changing dynamics of the processes and interactions within a team, states emerge that are relatively stable. A third limitation of IPO-models is the static conceptualization of processes, approaching teams as if they were placed out of time (Cronin, Weingart, & Todorova, 2011; Kozlowski, 2015).

To advance the study of boards as teams, it is imperative to move beyond these IPO-models and to discern between board behavioural processes and board emergent states, and hence replacing the traditional IPO-model by an Input-Process-State-Output model (IPSO-model) wherein the causal relations between the elements of the model are considered to be reciprocal (Marks, Mathieu, & Zaccaro, 2001; Mathieu, Hollenbeck, van Knippenberg, & Ilgen, 2017). IPSO-models better reflect the complexities of behaviour in teams by taking into consideration the relatively stable conditions that emerge from the patterns of interaction between different processes in a team.

A complexity perspective on conflict in teams

The research by O'Neill and others on team conflict provides good starting points for further exploration (O'Neill, McLarnon, Hoffart, Onen, & Rosehart, 2017; O'Neill et al., 2017; O'Neill, McLarnon, Hoffart, Woodley, & Allen, 2018). Building on the concept of the emergence of relatively stable states of interaction in teams (DeChurch, Mesmer-Magnus, & Doty, 2013; Marks, Mathieu, & Zaccaro, 2001), they approach the interplay of the three different conflict dimensions through the lens of a complexity perspective. Central to a complexity perspective is the idea that the whole - the macro level - is not only more than the sum of its parts – the micro-level – but above all very different (Anderson, 1972: 395). The occurrence of such very different phenomena in complex systems is referred to as emergence.

O'Neill and others (2018) add to this stream of research the conflict profiles within a team as emergent states. They define conflict profiles as latent patterns of team conflict, characterized by distinct levels of task conflict, relationship conflict and process conflict. In their view these conflict profiles represent the team members' shared perception of the multidimensional conflict state of the team. These conflict states furthermore 'should be relatively stable but subject to fluidity' (O'Neill, McLarnon, Hoffart, Woodley, & Allen, 2018: 815). While theoretically there are eight possible constellations of high and low levels of the three dimensions of conflict, O'Neill and others (2018) empirically established four conflict profiles in teams.

First, a profile in which the level of task conflict within a team is high, while the proportion of relationship conflict and process conflict remains low. This *TC-dominant profile* is found to be the most effective conflict profile in teams. Second, a profile in which the level of task conflict is also high, while the level of relationship conflict and process conflict has been moderate. This *RC/PC-minor conflict profile* is found to be less effective than the TC-dominant profile. In the third profile the proportion of task conflict and relationship conflict is relatively high while the level of process conflict is moderate. This *Midrange conflict profile* is even less constructive or even detrimental to the effectiveness of teams. The fourth profile is the *Dysfunctional profile* in which the level of all conflict dimensions is relatively high. This team conflict profile is found to be the most detrimental to the effectiveness of teams.

Table 1. Classification of conflict profiles in previous research

Conflict profile	Task Conflict	Relationship Conflict	Process Conflict	Effect on performance
TC-dominant	High	Low	Low	++
RC/PC-minor	High	Moderate	Moderate	+
Midrange	Moderate	Moderate	Moderate	+/-
Dysfunctional	Moderate	High	High	-

Note: classification based on (O'Neill et al. 2018).

Conflict profiles in supervisory boards in educational organisations

There is ample research indicating the presence of recognizable conflict profiles in teams (O'Neill, McLarnon, Hoffart, Woodley, & Allen, 2018). However, this research was done almost solely in artificial teams of undergraduate students. It remains to be determined whether these same conflict profiles are also reflected in genuine teams, much less in teams like boards. After all, boards are considered a special kind of teams (Adams, Hermalin, & Weisbach, 2010; Conger & Lawler, 2009; Forbes & Milliken, 1999). This leads to three questions on the extent to which research done previously on conflict profiles in teams is also applicable to supervisory boards in educational organisations.

Research Question 1: Are the same four conflict profiles found in previous research on teams also present in the context of supervisory boards in educational organisations and do these conflict profiles display the predicted relationship with the performance of board?

The effectiveness of a board generally viewed as the board's ability to effectively perform its tasks (Forbes & Milliken, 1999). In line with the previous chapters, this chapter follows suit and differentiates between a control task performance and an advisory task performance of a board. Chapter 4 also revealed a difference in the effect of conflict on the board's control task and the effect on the board's advisory task. However, the findings are not unequivocal and therefore no differentiation in the effect on the different tasks of the supervisory board is assumed in this research (Heemskerk, Heemskerk, & Wats, 2015).

The relative stability of conflict profiles

Conflict profiles are considered to have a certain degree of stability (O'Neill, McLarnon, Hoffart, Woodley, & Allen, 2018). Whereas processes within a team are inherently dynamic and changing, emergent states, especially in teams that have been established for a longer period of time, are expected to be relatively static (Marks, Mathieu, & Zaccaro, 2001). Conflict profiles as states are likewise not expected to experience much short-term changes (DeChurch, Mesmer-Magnus, & Doty, 2013). Accordingly, in their review on team conflict dynamics, O'Neill and McLarnon (2018) argue that temporal transitions of team conflict profiles are likely to be rare and that teams typically remain in the same conflict profile over time. If teams do change from one conflict profile to another, they will transition primarily to the conflict profile that most closely matches it in terms of its relation to team effectiveness (O'Neill & McLarnon, 2018).

While teams may occasionally transition from, for example, a Dysfunctional to a Midrange conflict profile, a direct shift from a Dysfunctional to a TC-dominant conflict profile appears to be unlikely. In spite of the reiterated call to test this hypothesized stability of conflict profiles in longitudinal research (O'Neill, McLarnon, Hoffart, Woodley, & Allen, 2018; O'Neill & McLarnon, 2018), a verification of this assumption has not yet been explored.

Research Question 2: Do conflict profiles in supervisory boards in educational organisations also display a certain degree of stability?

What makes conflict profiles transition?

However, it is not so much the stability of conflict profiles in teams that is intriguing to explore, but rather under which circumstances a board does transition to another conflict profile. Earlier research suggests that conflict management, the role of the chairperson and the cohesion within the team play an important role in the interplay between conflict dimensions and board effectiveness (Engbers & Khapova, 2024; O'Neill, McLarnon, Hoffart, Woodley, & Allen, 2018; Veltrop, Bezemer, Nicholson, & Pugliese, 2021). Accordingly this chapter focusses on these three factors as drivers of the transition from one conflict profile to another in supervisory boards in educational organisations.

Conflict management refers to the behavioural preferences in dealing with conflict that form a pattern of actions and reactions trough which conflict are handled within a team. Conflict management is thus an emergent state at the team level. Effective conflict management aims to minimize negative impacts and to promote more positive effects of conflict in teams. Teams differ in their conflict management styles (Engbers & Khapova, 2024; Rahim, 1983). Teams that use more integrative conflict management styles rather than confrontational or avoidance styles make more effective decisions (Kuhn & Poole, 2000). Effective conflict management thus is likely to be associated with conflict profiles in which the positive working of task conflict is not hindered by detrimental levels of relationship or process conflict.

The board chair plays an important role in creating an environment in which a board through participative decision-making can be effective in its performance (Banerjee, Nordqvist, & Hellerstedt, 2020; Engbers & Khapova, 2024; Pernelet & Brennan, 2023; Rahim, 1983). As principal F in *The UK Corporate Governance Code* requires the chair of the board to 'promote a culture of openness and debate' and to 'facilitate constructive board relations and the effective contribution of all non-executive directors' (Financial Reporting Council, 2018: 6). This requires a participative leadership style that enhances task conflict by inviting and challenging the members of the board to participate in discussions and decision-making in meetings, while simultaneously avoiding the rise of detrimental relationship and process conflict (Veltrop, Bezemer, Nicholson, & Pugliese, 2021).

For a board to be effective in fulfilling its task it requires the members to sense a shared responsibility towards monitoring and advising the executive directors. This requires a certain degree of cohesion within the board as a team. Chapters 3 and 4 already showed the extent to which cohesion in a board impacts the working of conflicts and effectiveness in boards. The cohesion within a team contributes to the active participation of the members and ensures more effective communication within a team (Casey-Campbell & Martens, 2009). The importance of cohesiveness and good relationships in boards for the effectiveness of the decision making and governance of the organisation is often stressed in the literature on corporate governance (Heemskerk, Heemskerk, & Wats, 2017).

Previous research indicates that conflict and its effect on the task performance of boards is tied to the cohesion within a board (Eirola, Bezemer, & Reinhold, 2024; Engbers & Khapova, 2024; Heemskerk, Heemskerk, & Wats, 2015). In particular the ‘triggering effect’ of task conflict on relationship conflict seems to be mediated by cohesion within a group, as suggested by Ensley, Pearson and Amason (2002). Chapter 3 found that supervisory boards with a high degree of cohesion are better able to prevent task conflict from escalating into relationship conflict. Cohesion, conflict and performance form a complicated interaction in the context of boards. Chapter 4 indicated that increasing cohesion in a board is correlated with an increase in task conflict and a decrease in process and relationship conflict, while at the same time a condition of increasing cohesion and increasing relationship conflict appears to be positively related to the task performance of supervisory boards in educational organisations.

Research Question 3: Will the change in conflict profile in supervisory boards in educational organisations be influenced by changing levels of conflict management, chair participative leadership or cohesion in boards?

Methods

To answer the research questions, a new and unique over time dataset was created on conflict in boards. The survey discussed in Chapter 1 and presented in detail in Appendix A was distributed in 2016, 2017 and 2018 to the executive directors of the approximately five hundred organisations in primary, secondary and vocational education. 15% of the organisations completed the questionnaire in all three years (N=73).

For a selected set of organisations that displayed relatively high levels of change additional qualitative information was collected to explore the context of team dynamics. This includes a set of open questions in the survey on the supervisory board's evaluation, the agenda topics and the upcoming issues. In addition, publicly available sources of data (LexisNexis newspaper database, annual reports of the organisations and local government documentation) regarding the organisations have been used to further enhance our understanding of the context in which the organisation and the supervisory board functions.

To answer our first two research questions and identify the different profiles in the supervisory boards a Latent Profile Analysis (LPA) for the conflict dimensions over all three years have been carried out using the tidyLPA-package in R (Rosenberg, Beymer, Anderson, Van Lissa, & Schmidt, 2019). LPA aims to identify groups that have different configural profiles of personal or environmental attributes by comparing patterns of variables (Spurk, Hirschi, Wang, Valero, & Kauffeld, 2020). To further examine the relationship between the conflict profiles and the effectiveness of supervisory boards in educational organisations, the mean scores for the control and advisory task performance were compared for the different conflict profiles. Independent sample t-tests were performed to evaluate whether the mean of a conflict profile's control and advisory task performance was significantly different from the mean of the other three profiles individually, following the three step approach suggested by Bakk and Vermunt (2016).

In order to test the stability of the four conflict profiles extracted by the LPA over the years a chi-square test was applied. To further analyse how group membership changed over the years, the stability of the conflict profiles in 2017 are compared to the previous year and in 2018 to both previous years.

To answer the third question and explore the association between the independent variables and the changing of conflict profile in the supervisory boards, hierarchical binominal regression analyses were performed using the direction of the change as the dependent variable. O'Neill and McLarnon (2018, Figure 3) outlined two directions for change in conflict profiles in teams across time, either an ascending or a descending trend.

Accordingly, two dummy variables were construed. First, the negative direction which includes all change in descending direction and the positive change which includes all change in ascending direction. The change in 2017 and 2018 was combined in these analyses, creating more statical power. Subsequently, for the independent variables: cohesion, conflict management and participative leadership, the increase over time was computed by subtracting the value for the year under study from the preceding year.

Considering the particular nature of cohesion as a team behaviour variable demonstrated in Chapter 4 and the expectation that the beneficial effects of participative leadership and conflict management, at least to some extent, run through the cohesion in a board of directors, a hierarchical model was adopted to first test conflict management and participative leadership as an initial model and then test the model with all independent variables.

Results

In the LPA, the model that best fitted the Bayesian and Akaike information criterion (BIC, AIC) with a significant ($p < .05$) bootstrap likelihood ratio test (BLRT) consisted of four different profiles. Those four profiles closely resembles the conflict profiles found in previous research (O'Neill, McLarnon, Hoffart, Woodley, & Allen, 2018).

The jitter plot in Figure 1 gives a visual representation of the conflict profiles. The patterns of the profiles that emerge in this analysis are nearly identical to the conflict profiles found in previous research (Cf. O'Neill, McLarnon, Hoffart, Woodley, & Allen, 2018, Figure 1. Reproduced in Appendix B). The first profile corresponds to the RC/PC-minor conflict profile. The second profile matches the TC-dominant profile from their research. The third profile is the dysfunctional profile, while the fourth profile is the midrange conflict profile. Most boards have either a TC-dominant or RC/PC-minor conflict profile, while a dysfunctional conflict profile seems less common. This answers the initial part of the first research question. While our research setting is markedly different from that of O'Neill and others, we find the exact same four conflict profiles. This suggests that the four profiles may be a universal property of team dynamics.

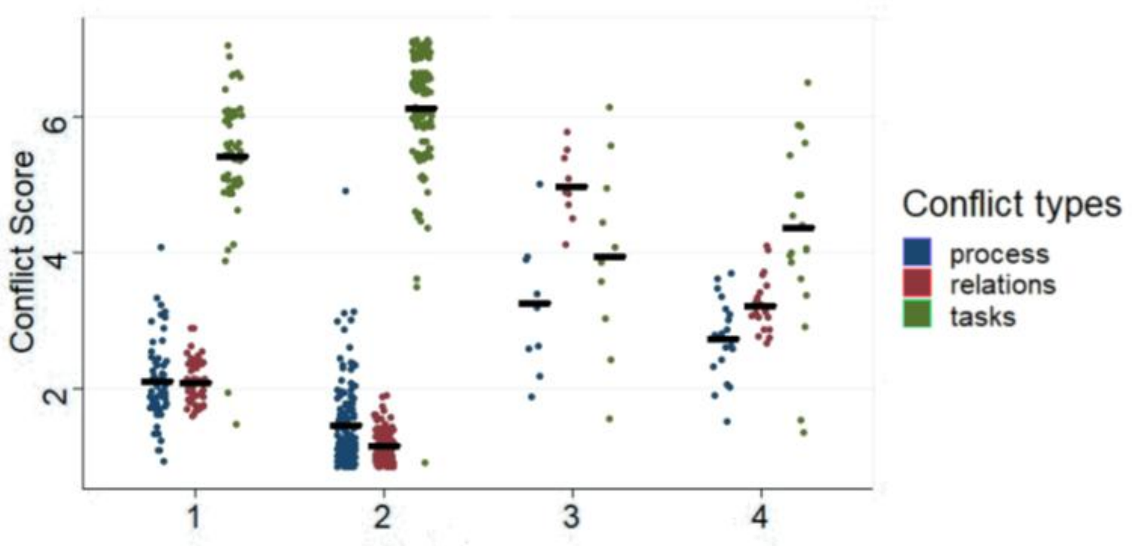


Figure 1. Four conflict profiles found by the Latent Profile Analysis. The horizontal lines denote the means. To enhance the legibility and clarity of the jitter plot, a small random spread was added to the y-values (conflict scores) of the data points so that data points that are at the same value become more visible. 1 = RC/PC-minor. 2 = TC-dominant. 3 = dysfunctional. 4 = Midrange.

Conflict profiles and effectiveness

Yet those four conflict profiles do not turn out to be similarly correlated with team effectiveness in supervisory boards in eduactional organisations as in previous studied teams. As the overview of the means of control task performance and advisory task performance in Table 2 further illustrates. Remarkably, we find that the so-called dysfunctional conflict profile has the highest mean score for the control task performance (M = 5.67, SD = .589) while the mean for the advisory task performance (M = 4.27, SD = .775) was also higher than for the Midrange conflict profile (M = 3.83, SD = .1.32).

Table 2. Test of significant differences in mean

	TC dominant	**RC/PC-minor**	**Midrange**	**Dysfunctional**
Control task performance	5.50[a]	5.31[b]	5.12[b]	5.67[a]
Advisory task performance	4.84[a]	4.65[a,c]	3.83[b]	4.27[b,c]
N	128	55	20	10

Note: differences in mean are calculated through combined t-tests (one-sided; equal variance assumed). Unshared superscripts indicate that means are significantly different by row.

In Table 2, for the control task performance, there is a significant difference between the TC-dominant and dysfunctional profile on the one hand (superscript a) and the RC/PC-minor and Midrange conflict profile on the other hand (superscript b). For the advisory task performance, the TC-dominant profile (superscript a) differs from the Midrange and dysfunctional profile (superscript b) significantly while the RC/PC-minor profile (superscript c) differ significantly from the Midrange profile (superscript b). This is in line with O'Neill and others' classification of the TC-dominant and RC/PC-minor profile as "Healthy Conflict" and the Midrange and Dysfunctional profile as "Unhealthy Conflict" (O’Neill, McLarnon, Hoffart, Woodley, & Allen, 2018). Although the latter in the context of boards is more positively related to the task performance. Thus, what is perceived as a dysfunctional conflict profile in previous work is in fact actually quite functional in the context of supervisory boards in educational organisations.

The relative stability of conflict profiles

The chi-square test to asses the stability of the four conflict profiles extracted by the LPA over the years showed a non-significant result (p = 0.5). However, this merely indicates that the sizes of the groups do not change significantly over the years. As demonstrated by the representation of the frequency of the different conflict profiles over the years in the first rows of Table 3.

A closer look at the data however reveal that unlike expected, conflict profiles are not that stable at all, as shown clearly in the last rows of Table 3. Over 40% of boards change conflict profiles within one year while nearly 60% change conflict profiles within two years. Stability is the exception rather than the rule.

Table 3. Frequencies of conflict profiles and stability over the years

Frequency	**2016**	**2017**	**2018**
RC/PC-minor	18	16	21
TC-dominant	43	41	44
Dysfunctional	2	5	3
Midrange	8	9	3
Stable		38[a]	42[b] 29[c]
Changing		33[a]	29[b] 42[c]

Note: [a] Compared to 2016 [b] Compared to 2017 [C] Compared to 2016 and 2017.

To further enhance our insight into the shifts in conflict profile over the years, the changes in group membership over the years were plotted with Sankey diagrams. Figure 2 combines both Sankey diagrams and depicts the change of conflict profiles over the years. The Sankey diagrams reveals that a fair number of boards change over the years from a TC-dominant conflict profile to an RC/PC-minor conflict profile and vice versa. There is no movement between a TC-dominant conflict profile and a dysfunctional conflict profile.

This corresponds to the assumption formulated by O'Neill and McLarnon (2018) that conflict profiles, if they change at all, will change primarily to an adjacent conflict profile, in terms of their presumed relationship to team effectiveness. Perhaps those transitions takes several years and progresses through the sub-optimal conflict profiles of RC/PC-minor and Midrange conflict. Between these two sub-optimal conflict profiles and the TC-dominant profile and the dysfunctional profile, there more movement is found.

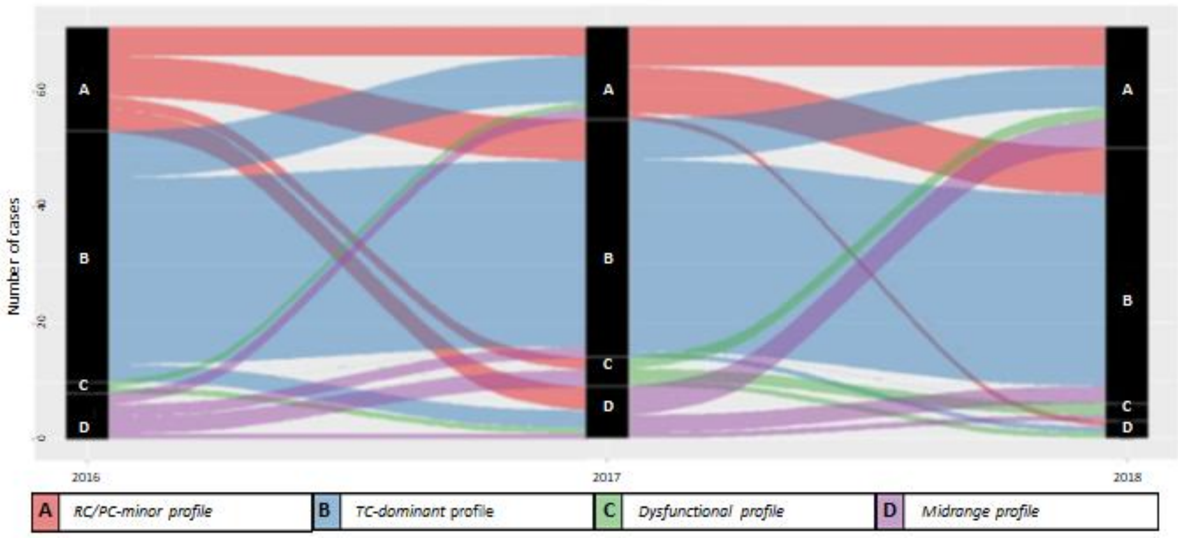


Figure 2. Combined Sankey diagrams of the transitions of conflict profiles

Changing conflict profiles

Conflict profiles in supervisory boards in educational organisations are less stable than previous work suggests. Therefore, we need examine under what conditions boards transition from one conflict profile to another. From earlier studies, it is anticipated that cohesion, conflict management and participative leadership play an important role in the transitions among the different conflict profiles in board of directors. Table 4 shows that the means of those three variables do indeed vary between the different conflict profiles. So there seems to be a relationship between cohesion, conflict management and participative leadership on the one hand and the extent to which a conflict profile, according to the literature, contributes to a team's effectiveness.

Table 4. Means and standard deviations for the variables in the different conflict profiles

Conflict Profile	**Cohesion**		**Participative Leadership**		**Conflict Management**	
	M	**SD**	**M**	**SD**	**M**	**SD**
TC-dominant	6.19	.596	6.33	.783	6.67	1.18
RC/PC-minor	5.38	.640	5.60	.734	5.70	1.23
Midrange	4.71	.806	5.31	.817	4.56	1.66
Dysfunctional	3.48	1.05	4.40	1.53	3.90	.994
Total	5.71	.958	5.95	.969	6.08	1.49

Since the dysfunctional conflict profile in the context of supervisory boards in educational organisations differs so distinctly in its association with the boards effectiveness from previous research on teams, these cases (N=11) were excluded from the binominal regression analyses. The results of the analyses are presented in Table 5.

Table 5. Odds Ratios (ORs) from hierarchical binominal regression analyses on direction of change

	Negative direction		**Positive direction**	
	Model 1	**Model 2**	**Model 3**	**Model 4**
Chair Participative Leadership	.750	.834	1.26	.994
Conflict Management	.650*	.677*	1.38*	1.25
Cohesion		.681		2.39*
Hosmer–Lemeshow goodness of fit (χ^2)	16.5	12.2	15.4	6.70
Nagelkerke R^2	.107	.120	.057	.149

Note: ORs below one reflect a less likely probability of change while ORs above one reflect a greater probability of change.

The Hosmer and Lemeshow Test indicated a good fit for all models ($p > .05$). The value of Nagelkerke R^2 indicates a rather weak relationship between the independent variables as predictors and the change of conflict profiles, since the value of R^2 is .2 or less in all models. Model 1 on the negative direction shows that an increase in conflict management leads to a significantly smaller probability (OR < 1) of a downward shift in conflict profile. When, in Model 2, the increase in cohesion is then added to the model, it does not change this effect of conflict management on the shift to a less effective conflict profile.

Model 3 on the positive direction only shows a positive effect of an increase in conflict management on the shift to a more beneficial conflict profile, while the explanatory power of the model is limited ($R^2 = .057$). For Model 4, only the increase in cohesion is found to have significant effect (OR = 2.39, $p < .05$). An increase in cohesion is more than two times more likely to result in a positive change in conflict profile in a board of directors. Conflict management mainly has a role to play in preventing a board of directors from shifting toward a less effective conflict profile, and it is the cohesion within a board in particular that is important for changing conflict profiles in a positive direction.

Given the weak predictive value of the models in the logistic regression analyses it is likely that more factors than cohesion, conflict management and participative leadership are involved in the transition of the conflict profiles in supervisory boards in educational organisations.

External factors in changing conflict profiles

Beyond what is going on internally within the black box of the board, it seems likely that external factors may also play an important role in a supervisory board's transition to another conflict profile. This chapter, hence, takes a qualitative assessment and zooms in further on the individual cases to gain insight into what external influences could potentially be involved in changes in conflict profile within a supervisory board. Seven cases stood out where the conflict profiles changed sharply in one year. These seven cases are presented anonymously in Table 6. From the answers to the open survey questions on the board's evaluation, agenda topics and future issues and from publicly available resources (LexisNexis newspaper database, annual reports of the organisations, local government documentation), an impression of the context in which the organisations displayed a sharp shift in conflict profile was constructed.

Three factors frequently recur in boards experiencing a sharp change in conflict profile: crisis situations, lack of clarity about the role of the supervisory board and changes in supervisory board composition. Some of the boards were indeed found to be affected by idiosyncratic crises. As Croci and others argue, such crises are caused by disruptive events, where organisations face significant risks to the continuity of the organisation due to internal struggles or disappointing operating results and revenues (Croci, Hertig, Khoja, & Lan, 2024).

Organisation [3] is an illustration of this. It is noteworthy that the organisation had a TC-dominant conflict profile in 2016 and 2018, but had a Mid-Range conflict profile in 2017. In the survey questions about the present agenda and issues, it is notable that in 2016 and 2018, the director's answers were mostly content-based. In 2016, educational housing in particular demands attention, as evidenced by media reports about struggles with local politicians over new construction projects and school maintenance. In 2018, in addition to focusing on finances, the main focus is on the growing teacher shortage. In 2017 a shift takes place, the agenda of the supervisory board is now mainly determined by an internal issue: 'change of governance and organisational structure'. The executive directors and the supervisory board members appear unable to agree on this issue and, at the end of 2017, the entire supervisory board is dismissed.

Table 6. Overview of all seven cases that have stood out having changed sharply from conflict profile over the years.

	2016	2017	2018	2016-2017	2017-2018	Type of Organisation
1	TC-dominant	Mid-Range	RC/PC-minor	-2	1	An organisation with multiple secondary schools
2	RC/PC-minor	TC-dominant	Mid-Range	1	-2	An organisation for tertiary vocational education
3	TC-dominant	Mid-Range	TC-dominant	-2	2	A large organisation for primary education
4	TC-dominant	Mid-Range	TC-dominant	-2	2	A regional organisation for special educational needs
5	Mid-Range	TC-dominant	RC/PC-minor	2	-1	A small organisation for special education
6	Mid-Range	TC-dominant	TC-dominant	2	0	A large organisation with multiple secondary schools
7	RC/PC-minor	Mid-Range	TC-dominant	-1	2	An organisation with multiple secondary schools

Changes in the composition of the supervisory board are an especially important recurring feature in the context of shifting conflict profiles. In half the cases, changes in the composition of the board appear to be related to shifts in the board's conflict profile (3, 4, 5 and 7). The success of [7] for example is probably associated with the change in board composition. The organisation switched recently, in 2014, from a one tier structure to a two tier model with an executive director and a supervisory board. In 2016, the composition of the supervisory board changed significantly when three of its five members, including the chairman, resigned. The new supervisory board subsequently obtained external assistance in their evaluation in 2017 - with the executive director at least being satisfied: '[...] with a satisfactory result in terms of role clarity.'

In the case of organisation [2], the change of supervisory board composition came too late. In 2017, the executive director, when asked what determined the agenda of the supervisory board, replied: ‘Struggle between the supervisory board members and the executive director (the supervisory board steps into the role of the executive director)’. Main point of attention for the future, according to the executive director: ‘Getting rid of this board as soon as possible!’ In 2018, the organisation was placed under increased financial supervision by the Inspectorate of Education. The executive director then clashed with the supervisory board over a merger proposal. The director was suspended and fired after a lawsuit. Friction and debate around the desired roles of the supervisory board in relation to the executive director and the internal focus on governance arrangements within the board is another recurring theme in changes in conflict profile in supervisory boards (1, 2, 3, 4, 5 and 7)

Three recurring factors are relevant in the context of boards that are subject to changing conflict profiles: crisis situations; lack of clarity regarding their own role; and changes in board composition. From an agency theory perspective, the composition of boards has been studied extensively, yet this study reveals that the issue is not the composition in itself: the percentage of independent board members or the number of board members, but rather the impact of changes in composition on the social dynamics within a board.

Discussion and limitations

This study responds to the call for research on the robustness of the four conflict profiles in ‘field teams’ (O’Neill, McLarnon, Hoffart, Woodley, & Allen, 2018; O'Neill & McLarnon, 2018). The four conflict profiles are indeed found to be present in supervisory boards in educational organisations. This underlines the added value of the concept of conflict profiles as emergent states in teams in general and in supervisory boards in particular. Interestingly, the correlation with effectiveness is partially different than expected and found in other teams (O'Neill, McLarnon, Hoffart, Woodley, & Allen, 2018).

A dysfunctional conflict profile actually is particularly effective in the context of supervisory boards, especially with respect to the control task performance. Considering the nature of the work of boards as teams, overseeing the performance of the executive director and critically questioning the strategy of the organisation, it is likely that conflict plays an important role in the functioning of boards and that therefore, in part, higher levels of conflict in a dysfunctional conflict profile are actually fruitful. Previous research has shown that in the context of boards a certain level of relationship conflict is less harmful than the absence of conflict (Heemskerk, Heemskerk, & Wats, 2017), while Chapter 4 has found that in a condition of increasing cohesion, relationship conflict appears to be positively related to the control task performance of boards.

These findings are also consistent with prior research in which the effect of conflicts on effectiveness appeared to differ between the control and advisory task of the board. A couple of studies indicate that task conflict is positively related to advisory task performance but not to control task performance (Heemskerk, Heemskerk, & Wats, 2015; Minichilli, Zattoni, & Zona, 2009; Zattoni, Gnan, & Huse, 2015). Whereas on the contrary, some studies find an effect of task conflict for the control task but not for the advisory task (Van Ees, Van der Laan, & Postma, 2008) or do not find any differences in the effect on the both board tasks (Minichilli, Zattoni, Nielsen, & Huse, 2012; Zona & Zattoni, 2007). With respect to the conflict profiles in this research, the association also is more pronounced for the advisory than for the control task performance of boards.

Although conflict profiles have generally been assumed to be fairly stable (Minichilli, Zattoni, Nielsen, & Huse, 2012; O'Neill, McLarnon, Hoffart, Onen, & Rosehart, 2017; O'Neill, McLarnon, Hoffart, Woodley, & Allen, 2018; O'Neill & McLarnon, 2018; Zona & Zattoni, 2007) it turns out that, at least in the context of supervisory boards in educational organisations, this is not the case. Even in a short span of two years, the majority of supervisory boards are found to change conflict profiles. The fact that conflict profiles in boards are much more dynamic than expected prompts the question whether supervisory boards as teams behave differently than other teams in this regard. It would be helpful if future research mapped out the stability of conflict profiles in other types of teams. Taking into account the special nature of supervisory boards as teams and especially the limited number of moments of interaction, it seems logical to assume that boards may be more dynamic in their behavioural states compared to other more frequently engaging teams.

The question what makes a supervisory board to switch conflict profiles has been partially answered with this research. Clearly, conflict management within the board has a role in this in terms of preventing a transition to a less effective conflict profile, while an increase in cohesion within a board is related to a transition to a more effective conflict profile. However, whether increasing cohesion is the driving force behind this change or mostly a byproduct of such a shift to a more effective conflict profile, remains an open question. Conceptually, however, cohesion within a team might be more at the level of an emergent state than that of a driving process.

Closer observation of the contextual factors that appear to play a role in the transition towards a different conflict profile, especially when these are relatively large steps, reveals that crises, a lack of clarity about the role of the board and changes in the composition of the board are contributing factors. The latter underwrites the notion that supervisory boards are not a collection of loose individuals but rather teams in which mutual interaction shapes their output.

This chapter has some limitations. Mainly, a limited time frame of three years was selected to capture the changes. Future research could focus on what other factors play a role in the change of conflict profiles within supervisory boards by conducting exploratory qualitative research and tracking supervisory boards over a longer period of time in order to gain more insight into what actually occurs within boards. Perhaps only then will the lid truly come off the black box of boards as teams.

Table 7. Overview of findings in Chapter 5

Research questions		Findings
1	Are the same conflict profiles found in previous research on teams also present in the context of boards and do these conflict profiles display the predicted relationship with the performance of board?	We do indeed find the same conflict profiles in supervisory boards in educational organisations, but they do not appear to correlate in the exact same way with board effectiveness. On the contrary, the profile with high relationship conflict, seen as dysfunctional in artificial teams, is actually fruitful in boards.
2	Do conflict profiles in boards also display a certain degree of stability?	Conflict profiles turn out to be far less stable than expected in an actual team like a supervisory board of an educational organisation. Change of conflict profile rather appears to be the norm than the exception in supervisory boards.
3	Will the change in conflict profile in boards be influenced by changing levels of conflict management, chair participative leadership or cohesion in boards?	This influence is quite modest. Conflict management helps to prevent a board of directors from shifting toward a less effective conflict profile, and cohesion is important for changing conflict profiles in a positive direction. Contextual factors seem more important. Especially crisis situations, lack of clarity about the role of the supervisory board and changes in supervisory board composition.

Chapter 6 Conclusion

Introduction

The research question at the heart of this dissertation is the enquiry into what makes supervisory boards in education effective. While improvement of governance in educational institutions is often pursued through laws, regulations and procedures, the research on governance in a corporate setting has indicated that the effectiveness of boards is mainly a matter of behaviour of boards of directors and supervisory board members. In this dissertation, in line with this research on behaviour in boards in corporate settings, behavioural indicators of effective internal supervision in education were explored, building on Forbes and Milliken's model of boards of directors as social groups (Forbes & Milliken, 1999).

This concluding chapter is organised in three parts. In the first section I will outline how each chapter in this dissertation contributed to answering the research question and then discuss the limitations of my research and address the issues left unanswered. In the second part, I will explore the potential of complexity theory in overcoming these limitations and advancing the research on effective behaviour in boards of directors. Lastly, in the third part, I will offer recommendations for the practice of supervisory boards in educational organisations, drawing from the insights gained through this research project.

PART I: WHAT MAKES SUPERVISORY BOARDS IN EDUCATION EFFECTIVE?

The introductory first chapter of this thesis outlined how, following the increasing autonomy and size of schools in The Netherlands, supervisory boards made their entrance in Dutch educational institutions. This governance model sprang from the corporate world, and Chapter 1 thus draws from the research on supervisory boards and boards in the corporate world to outline the research model and design that underpins this thesis.

Over the past decades, growing interest in the behaviour of boards of directors has brought forth empirical studies on actual board behaviour. An important stream within this research followed the model proposed by Forbes and Milliken in 1999 in which three board processes: effort norms, cognitive conflict and the use of knowledge, are hypothesized to influence the cohesion and performance of boards of directors (Forbes & Milliken, 1999; Huse, 2009b; McNulty, 2013). Chapter 2 aims to take stock of the results from this stream of research. The sometimes inconsistent results, and assumed methodological flaws of this research, leave open the question whether it makes sense to continue with this line of research (Bezemer, Pugliese, Nicholson, & Zattoni, 2023; Heemskerk, Heemskerk, & Wats, 2015; Huse, 2009c).

Through a research synthesis of 17 primary studies on (parts of) the model proposed by Forbes and Milliken (1999), this question is addressed directly in Chapter 2 by clarifying what is known from the research done so far and by identifying possible distorting methodological moderators. It is striking that almost all research is confined to the three aforementioned behavioural processes within a board, while there seems to be barely any research that includes cohesion as an intermediate variable. Strong empirical support is found for the effect of the processes of effort norms and the use of knowledge and skills on board task performance.

The evidence for conflicts however was found to be inconclusive. Thus, it is to be expected that supervisory boards in general benefit from having well-defined standards regarding the effort expected from board members and that supervisory boards perform better when the knowledge and skills present are actually put to use. Earlier research on supervisory boards in secondary education in the Netherlands has shown this as well (Heemskerk, Heemskerk, & Wats, 2015). Apparently, the role that conflicts play in this regard is less unequivocal.

In Chapter 2, the main reason put forward for these inconclusive findings on conflict is the conceptualization of conflict in research on boards of directors. Meta analyses of the previous research indicated that the way the items measuring conflict are constructed is associated with the reported association with board effectiveness. There appears to be a noticeable divergence in this regard between the cognition-oriented and frequency-oriented operationalisations of conflict, in which more cognition-oriented operationalisations appear to be more strongly associated with the effectiveness of boards of directors than the frequency-oriented operationalisations of conflict. At the same time, operationalisations of conflict appear to be sloppy and simplistic in both approaches. It is therefore important to align the operationalisation of conflict more closely with the common practices in team effectiveness research.

The multidimensionality of conflict in boards

In the team effectiveness literature, there is a clear consensus that conflict in teams is a multidimensional concept in which three different dimensions of conflict are typically distinguished: task conflict, process conflict and relationship conflict (Jehn, 2014). Chapter 3 therefore explores the effect of conflict in supervisory boards of educational institutions through a multidimensional model of conflict in teams, adopting the suggestions for operationalisation in the team effectiveness literature, in the context of supervisory boards in educational organisations (Bendersky et al., 2010; Jehn, 1995, 1997).

The findings in Chapter 3 underscored the value of a multidimensional approach to conflicts on supervisory boards in educational organisations. The different dimensions of conflict were found to be related differently to the effectiveness of the supervisory board. As anticipated, task conflicts were found to be positively and relationship conflicts negatively related to supervisory board task performance. Unlike expected, the effect of process conflicts on the board's task performance was non-significant. Whereas the team effectiveness literature assumes that process conflict and task conflict ‘trigger’ the emergence of relationship conflict, for task conflicts in supervisory boards this seems to be completely different - rather, task conflict tends to have a dampening effect on relationship conflict within a board. This mitigating effect of task conflicts on relationship conflicts is fully absorbed by the much stronger mitigating effect of cohesion within a board.

Since, the cohesion within a supervisory board and the participative leadership of the chair of the supervisory board are found to influence both the effect of relationship conflict on the effectiveness of the supervisory board as well as the dampening effect of task conflict on the occurrence of relationship conflict. Chapter 3 highlights, consequently, that the relationship between different dimensions of conflict and cohesion and leadership in a supervisory board is more complicated than commonly assumed. This requires a deeper understanding of the dynamics in the relation between conflict dimensions, leadership, cohesion and effectiveness of supervisory boards in education over time.

The dynamics of conflicts in boards

Chapter 4 took an important step in this regard by exploring in a longitudinal research design the dynamic effect of conflict dimensions and cohesion on the effectiveness of supervisory boards. An increase in task conflicts was found to have a positive effect on both the control as well as the advisory task performance of supervisory boards, while an increase in relationship conflict had a negative effect on the control task performance and an increase in process conflicts had a negative effect on the advisory task performance. Furthermore, Chapter 4 highlights how conflict dimensions behave differently in an environment with increasing or decreasing cohesion. The positive effect of task conflict on the task performance of the supervisory board is more pronounced when cohesion in a board has increased as well. When the cohesion and the task conflict both show a declining trend it comes at the expense, in particular, of the supervisory board's control task performance.

The most intriguing finding from Chapter 4, however, is that the cohesion within a supervisory board is an important moderator of the effect of relationship conflict on the effectiveness of supervisory boards. If relationship conflict increases, it has a positive effect in supervisory boards in which cohesion increases as well and a negative effect in boards where cohesion decreases. Chapter 4 thus has revealed that the relationship between conflict and effectiveness in supervisory boards over time does indeed differ among the dimensions of conflict and that at the same time this effect is also dependent on the cohesion within a supervisory board.

The emergence of conflict profiles

Chapter 5 seeks to get a handle on this association among conflict dimensions, cohesion and effectiveness through approaching conflict dimensions in their context as emergent states, drawing on the research on conflict profiles by O'Neill and others (O'Neill, McLarnon, Hoffart, Onen, & Rosehart, 2017; O'Neill, McLarnon, Hoffart, Woodley, & Allen, 2018). Conflict profiles are configurations of the three conflict dimensions, task, process and relationship conflict, within a team. While conflict profiles in prior research have been examined mostly in cross-sectional research and primarily in artificial teams of undergraduate students, the very same conflict profiles appear in supervisory boards as well.

However, two things do stand out. First, the conflict profiles in supervisory boards are much less stable than anticipated, and second, the 'dysfunctional' conflict profile found in prior research - a situation of relatively high relationship conflict and lower process and task conflict - appears to be much more positive in the context of supervisory boards in educational organisations than expected.

Chapter 5 also reveals how participative leadership by the chair and conflict management appear to be important in preventing a supervisory board from slipping towards a less effective conflict profile, whereas cohesion in particular plays a role in shifting towards a more effective conflict profile within a board. Studying conflicts within supervisory boards through a complexity perspective clearly has added value as Chapter 5 illustrates that emergent phenomena such as conflict profiles do not only play a role in artificial teams but in actual real-life teams as well.

Contribution to the literature

What makes supervisory boards in education effective? We have learned from past research that board effectiveness does not primarily hinge on board composition and structure, but mainly depend on the behaviour and culture within a board (Forbes & Milliken, 1999; Huse, 2005; McNulty, 2013). However, what behaviour makes a board effective? The research in this thesis highlights how, as Chapter 2 documents, boards, like other teams, benefit from clear effort norms and adequate use of the knowledge and skills at hand. An key behavioural determinant of board effectiveness that this thesis sheds new light on is the effect of conflicts for the effectiveness of boards.

In the literature on board behaviour and board effectiveness, the role of conflicts has been an unresolved issue in the quest to figure out what makes boards effective. In three ways, this thesis contributes to the unravelling of the nexus between conflict and board effectiveness. First, it reveals how conflict is not a monolithic construct but rather a multidimensional concept in which different dimensions can be discerned. Furthermore, this research demonstrates how those different conflict dimensions within a board are subject to change and how such change correlates with the effectiveness and cohesion of a board. Finally, this research shows how in these changing patterns of different conflict dimensions one can identify recurring conflict profiles with a differentiated correlation to the effectiveness of a board.

Departing from past research on conflicts in boards in these three aspects, this thesis' research is able to reveal how supervisory boards of educational institutions appear to behave radically different than expected in regard to the role that conflicts play for their effectiveness. Contrary to presumptions in past research and prevailing advice to supervisory boards, conflicts and even relationship conflicts, are found to be critical to the optimal functioning of supervisory boards.

Chapter 3, for instance, illustrates that while in teams task conflict is usually expected to trigger relationship conflict, in supervisory boards in educational organisations the opposite appears to be true: task conflict is found to have rather a dampening effect on relationship conflict, especially in boards where the cohesion is relatively high. In a cohesive supervisory board, a solid debate on the content does not cause interpersonal friction but instead strengthens mutual relations. Chapter 4 further adds that the negative effect of relationship conflicts on the control task performance of supervisory boards disappears when the cohesion within a supervisory board increases. A setting of increasing relationship conflicts and increasing cohesion at the same time turns out to be optimal for the control task performance of supervisory boards. Chapter 5 even reveals how a conflict profile with high levels of relationship conflict detrimental to performance in other teams, and hence referred to in the literature as a 'dysfunctional profile', is actually a quite functional profile for supervisory boards and positively impacts their effectiveness.

Limitations and avenues for future research

A first limitation of this dissertation is that it is limited to previous research, survey data and public data sources. Although Chapter 2 downplays the methodological caveats to survey research on board behaviour, it is important to observe supervisory board behaviour more directly to further expand our understanding of the functioning of supervisory boards. Obviously, research aiming to directly observe board behaviour also comes with its own caveats. From a methodological perspective, it is often difficult to gain access to supervisory board meetings. However, previous research on boards has shown that analysis of video recordings (Bezemer, Nicholson, & Pugliese, 2014; Pugliese, Nicholson, & Bezemer, 2015) or even direct observation of meetings as fly on the wall (Machold & Farquhar, 2013) is feasible. A further concern against relying on direct observation of behaviour on supervisory boards is that not all relevant behaviour is readily observable. For example, Charas and Perelli (2013) described how boards differ in their handling of conflicts in their 'front' stage behaviour in the boardroom and their 'back' stage behaviour in the corridors and in bilateral interactions and Pernelet and Brennan (2023) reveals how answers and the level of dissent among non-executive directors differ between public and closed meetings of the board. Stevenson and Radin (2009) likewise highlight how board members who also see each other outside the boardroom have the most influence. Furthermore, Engbers and Khapova (2024) reveal how much the conflict climate in a board is shaped by what board members feel and think but do not articulate in the boardroom. Observing interactions in supervisory board meetings only tells part of the story, then. For future research, it is therefore important to integrate both research methods by observing behaviour and questioning perceptions of board members through interviews or surveys.

A second limitation of this thesis is that it adheres to a linearly based way of thinking in regard to the causal relationship between behaviour and effectiveness. Although it rejects the overly simple input-output models that were and are often used in research on the effectiveness of boards. After all, those models do not account for what takes place between input variables - such as diversity within a board - and output variables - such as the educational outcomes of an educational organisation. However, at the same time, this dissertation does to certain degree stick to the all-too-easy linear causal underlying model of input, processes and output. This IPO-framework suggests a linear progression of main effect influences proceeding from one category to the next (Ilgen, Hollenbeck, Johnson, & Jundt, 2005). The research in this dissertation goes a step beyond traditional IPO-models by exploring mediators for the relationship between process variables and the effectiveness of supervisory boards in Chapter 4 and by suggesting an Input-Process-State-Output-model in Chapter 5 in which stable states emerging from the patterns of interaction within a team have a distinct place alongside the more volatile processes within a supervisory board as a team. And while Chapter 5 does take a step forward by examining the different conflict dimensions through a complexity lens, the research in this thesis still adheres by and large to a linear line of thinking. What could benefit future research is if it would be able to allow partial studies of relations between the various elements of environment, behaviour and effectiveness of supervisory boards to fit into a bigger picture in in which supervisory boards are perceived as complex adaptive systems. Part II of this concluding chapter therefore sketches the initial outlines of a researchable model of boards as complex adaptive systems.

A final limitation of this research is that it is conducted in the context of supervisory boards in educational organisations in the Netherlands. Which prompts the question to what extent it is generalizable across countries and sectors. Forbes and Milliken (1999) for instance explicitly point out that they have developed their model in view of boards of US based firms and argue that applying their model to other countries requires special care with regard to the legal and historical differences between countries. It is not inconceivable, certainly when it comes to behaviour and culture in a board room, for the national governance setting to have a significant impact.

In their review of comparative corporate governance research Aguilera and Jackson (2010) point to the fact that studies that open up the black box of actual board behaviour often lack a systematic comparative analysis of boards from different national contexts. The study carried out by Minichilli and others (2012) is an interesting exception. They argued that board processes will be stronger predictors of board task performance in individualistic, hierarchical national contexts rather than in collectivistic, participative societies. Firms in a low participative decision-making culture will benefit more from strong effort norms to create a culture of commitment and preparation within boards. In their comparison of board processes in Norway and Italy they indeed found that the national governance context moderates the relationships between board processes and board task performance. The effect of effort norms on board task performance, for instance, was stronger in Italian firms than in Norwegian firms (Minichilli, Zattoni, Nielsen, & Huse, 2012).

In addition to the national governance context, the particular industry in which the research was done will undoubtedly also make a difference. The governance climate in a supervisory school board will differ from that of a publicly traded company with a one-tier board. Yet, as Minichilli and others' (2012) study on Effort norms also reveals, such differences are more likely to be gradual in nature than substantially divergent.

PART II. A COMPLEXITY PERSPECTIVE ON BOARDS

The conduct of dissertation research is also perhaps a complex system in itself. At least it has a high degree of path dependence throughout its development. This section advances the recommendations for future research and explores a workable theory of boards as teams in which I adapt and integrate concepts from complexity theories. Thus enabling us to reason on boards as complex systems composed of team members that are complex systems themselves – individual directors with different, changing and interacting preferences, intentions and behaviours.
Chapter 5 of this thesis made a first step in mapping out the complexity of patterns of emergent phenomena over time through examining the transitions of conflict profiles and relating them to effectiveness of supervisory boards. Chapter 5 shows that insights derived from complexity theory can thus contribute to a better understanding of the behavioural processes within boards. Future research should advance this further in considering boards to be complex adaptive systems.

The complexity of boards as teams

The relevance of the new insights that complexity science brings for organisation science is becoming increasingly recognized over the past decades (Axelrod & Cohen, 2000; Chiva, Ghauri, & Alegre, 2014; Goergen, Malin, Mitleton-Kelly, Al-Hawamdeh, & Hse-Yu Chiu, 2010; Mathews, White, & Long, 1999; Mitleton-Kelly, 2003; Turner & Baker, 2019). However, not all organisational scientists are equally enthusiastic, some point to the risk of complex systems becoming a merely metaphorical used 'fad' in organisational studies (Cohen, 1999; McKelvey, 1999). In order to prevent it from becoming such a merely fashionable analogy a 'rigorous, internally consistent, and empirically adequate theory' is the necessary next step (Johnson & Burton, 1994: 328).

As for teams as complex adaptive systems, such empirically adequate theory is not quite fully developed. Although the functioning of teams in organisations seem an obvious area to investigate the applicability of insights on the behaviour of complex adaptive systems, as developed in physics and biology, there are not that many theoretical studies within the organisation science on teams as complex systems (Ramos-Villagrasa, Marques-Quinteiro, Navarro, & Rico, 2018). Following Marks and others (2001) temporally based framework of teams distinguishing team processes and team emergent states, there has been increasing interest within the research on teams for the role of emergent states (Rapp, Maynard, Domingo, & Klock, 2021). Complex systems theory could provide an important step towards a better understanding of the nature of emergent states and the temporal patterns of emergence or, in other words: how emergence emerges in teams (Mathieu, Gallagher, Domingo, & Klock, 2019; Rapp, Maynard, Domingo, & Klock, 2021). An key stepping stone in this theory building, is the book of Arrow and others (2000) on small groups as complex systems. They consider groups as adaptive, dynamic systems that are driven by interactions between group members and between group behaviour and group embeddedness.

Boards may be considered a small group and more precisely as an organisational team (Brennan, 2022; Pastra, Koufopoulos, Samac, & Johansson, 2021). Boards however are a special kind of organisational team, nevertheless boards as a social group appear to fit with Arrow and others' definition of a small group as 'a loosely coupled system of mutually interacting, interdependent members […] with a shared collective identity' (2000: 4). A board of directors is a small group with a high degree of complexity, and three characteristics of complex adaptive systems seem important building blocks for the required 'rigorous, internally consistent, and empirically adequate' theory of boards as complex systems. First, boards as complex adaptive systems are open and nested systems that have a memory (Arrow, McGrath, & Berdahl, 2000). Second, the essence of boards as complex adaptive systems lies in their in-between-ness (Miller & Page, 2007). And, most significant, boards as complex adaptive systems display emergence (Goldstein, 1999).

Boards as open systems

The dominant metaphor in the behavioural research of boards is 'opening the black box' (e.g. Leblanc & Schwartz, 2007; Neill & Dulewicz, 2010; Zona & Zattoni, 2007). Researchers want to steer away from the agency-informed input-output model and gain insight into what is happening in between those two. The main limitation of the black box metaphor is that boards seem to be regarded as closed and stabile systems in which the individual directors are not receptive to influences from outside the board itself. However, groups and definitely boards are not closed systems. An open system approach towards boards is not new, and this approach ties in with the research on boards from, what Gabrielsson and Huse (2004) labelled as the ‘contingency focus’ on boards of directors, that does take into account the impact of the wider environment on boards.

However, boards as complex adaptive systems are not only open, they are also nested – boards are embedded within their organisations and consist of directors that themselves are complex adaptive systems. As Arrow and others explicate on small groups as open systems: “Groups are open and complex systems that interact with the smaller systems (i.e., the members) embedded within them and the larger systems (e.g., organisations) within which they are embedded.” (2000: 37). This means that boards are not only influenced by environmental factors, but also that boards cannot be studied dissociated from their nested contexts.

Boards as complex systems have memory (Richardson, Cilliers, & Lissack, 2001). They are not isolated in time, so reactions to external factors or internal interaction are also determined by the earlier experiences with similar effects or interactions. This memory of complex social systems is closely related to the theory of Transactive Memory Systems (Cannon-Bowers, Salas, & Converse, 1993; Wegner, 1987). The path dependency of interactions within boards problematize the usefulness of laboratory testing of group interactions within artificial temporary groups with a clear short-term task for understanding real-life groups with their own history (Arrow, McGrath, & Berdahl, 2000).

The in-betweenness of boards as complex systems

The second element of complexity theory that is applicable to boards as complex systems involves their ‘in-betweenness’. The subtitle Richardson and others (2001) wrote above their article on the state of affairs in complexity theory is tellingly: ‘Complexity Science: A 'Grey' Science for the 'Stuff in

Between''. The 'Stuff in Between' is the locus from where we can comprehend boards as complex systems. This in-betweenness has different aspects. First, complex systems are in between chaos and order. Boards and complex systems are not rigidly ordered teams, but also not highly disordered and unbounded groups (Arrow, McGrath, & Berdahl, 2000: 38). In line with that, boards are also in between equilibrium and chaos. Boards as a social systems are constantly in motion and may be more often not in equilibrium without leading to chaos. As Chapter 5 also reveals, boards change their conflict profile far more often than was expected without necessarily resulting in a deficiency in their task performance. By viewing boards as complex adaptive systems, we can explore that position between equilibrium and chaos (Miller & Page, 2007: 222).

Last, but most important, the micro-foundations of boards as complex systems are the interactions of individual directors as moderate complexity agents. The concept of moderate complexity agents was introduced by Abrams (2013), who places this kind of agents in between simple agents and complexity agents. Simple agents are individuals whose interactions are governed by a few simple variables – most complex adaptive systems contain such simple agents. Complex agents have a highly complex internal cognitive architecture and are used in models for artificial intelligence research.

I do not consider directors in boards to be simple agents, for the insights from behavioural research on boards shows the untenability of the idea of directors as simple rational actors (Van Ees, Gabrielsson, & Huse, 2009). This choice seems to be a distinct deviation from the 'classical' complex adaptive systems we find in nature, like the cooperation in an ant colony or a beehive. Such natural systems derive their complexity from 'simple' interaction between a large number of actors, as the complexity of boards of directors mainly lurks in the 'complex' interaction amongst a far more limited number of actors. The behaviour of a board director is much less rational and much more complex than that of a bee.

Emergence in boards

Next to the characterization of boards as open systems with memory and the in-betweenness that characterizes boards, the concept of emergence is the third and perhaps most significant element in complexity theory that can be applied to boards of directors as complex adaptive systems. Westphal and Zajac (2013) argue that the micro-level of individual directors behaviour is always embedded within the macro-level social world. Complex adaptive systems theory shares with Westphal and Zajac (2013) this rejection of the doctrine of methodological individualism: one cannot explain board of directors behaviour as a group from the individual board directors actions, since - according to Westphal and Zajac - board directors have been formed and give form to the social world of the board in which they function.

Complex adaptive systems theory moves a step further. Central to complex adaptive systems is the idea that the whole - the macro level - is not only more than the sum of its parts – the micro-level – but above all *very different* (Anderson, 1972: 395). The occurrence of such very different phenomena in complex adaptive systems is referred to as emergence.

What are and what are not emergent phenomena, is an ongoing debate - in part dependent upon the nature of the complex adaptive system under study (Corning, 2002). I follow the threefold classification of emergent team phenomena as set forth by Waller and others (2016) as emergent *states, behavioural patterns, and structures*. Marks and others (2001) introduced *emergent states* in the team effectiveness literature to discern between interaction processes within teams and the dynamic team characteristics that emerge from and shape these interactions. In their own words emergent states are: 'constructs that characterize properties of the team that are typically dynamic in nature and vary as a function of team context, inputs, processes, and outcomes' (Marks, Mathieu, & Zaccaro, 2001: 357).

A review study of the research on emergent states indicates that the conceptualization of emergent states varies among studies (Rapp, Maynard, Domingo, & Klock, 2021). Examples of emergent states are the cohesion (Jehn, Greer, Levine, & Szulanski, 2008), group potency (LePine, Piccolo, Jackson, Mathieu, & Saul, 2008) or shared mental models (Marques Santos & Margarida Passos, 2013) within a group.

Another emergent phenonemon are the *behavioural patterns* that emerge from recurring sequences of interaction. Axelrod and Cohen (2000: 6) give as an example of such interaction patterns, the borrowing strategy moves among friend or relatives. Examples in the setting of boards of directors can be found in the differences in interaction patterns across agenda items in the board as observed by Bezemer and others (2014). These patterns can arise from the interaction of local actors, but can also be patterns in the dynamics of emergent states. Arrow and others (2000: 45) seem to point to the multilevel approach to behavioural patterns as they state that the aim of an complex adaptive system approach of small groups is to examine the qualitative patterns in the trajectory of system-level variables over time (see Kozlowski & Chao, 2012 for such a dynamic approach of emergent states).

In studies on complex systems emergent patterns and *structures* are often used as interchangeable concepts. However, structures emerge from patterns and are thus manifest on another, less dynamical and more persistent, level. Leadership might be a clarifying example of an emergent structure. There is a growing literature on emergent leadership in self-organized groups (Guastello, 2010; Lichtenstein & Plowman, 2009; Mendes, Gomes, Marques-Quinteiro, Lind, & Curral, 2016; Plowman et al., 2007). Leadership in boards seems less self-organized, although board leadership is far more complex than the binary choice of whether or not to have chair duality, for instance Nahum and Carmeli (2020) point to emergence of generative leadership of individual directors within boards. A more common studied emergent structure in behavioural corporate governance are fault lines within boards of directors (Crucke & Knockaert, 2016; Kaczmarek, Kimino, & Pye, 2012; Kaczmarek, 2017).

Characteristics of emergence in boards

As Holland (2000: 3) admits in his monograph on emergence, it is highly unlikely that a complex concept as emergence 'will submit meekly to a concise definition'. The history of the concept and the multitude of nuances in its different definitions in various fields have been explicated by others in detail (e.g. Corning, 2002; Goldstein, 1999, 2013a, 2013b, 2014; Rapp, Maynard, Domingo, & Klock, 2021; Waller, Okhuysen, & Saghafian, 2016). In the conceptualization of emergence in the context of boards as complex adaptive systems in this chapter, emergence refers to the arising of novel and ostensive states, behavioural patterns and structures on the group or global level out of the local-level interactions and processes within the board (Arrow, McGrath, & Berdahl, 2000; Goldstein, 1999; Waller, Okhuysen, & Saghafian, 2016). From this description follow some characteristics of emergent phenomena that require a more detailed explanation.

First, emergence starts from the *local-level interactions and processes* within the board. This interaction on the individual, local level is not limited to the dyadic interaction between members of the group - they are what Goldstein (2011: 72) called 'thick interactions', in which, for example, group-level processes interact with individual preferences, and in which this interaction in itself is affected by context factors. In a real life board example: The chairman of a supervisory board in an educational organisation may feel inhibited by the personal circumstances of the executive director to express his frustration over his hasty decision making on a megalomaniac school building project.

Second, the complexity of the interactions in a complex adaptive system is mainly due to the *non-linear nature* of these interactions. This non-linearity in complex systems is a result of the dense web of interdependencies and feedback loops within interactions (Anderson, 1999). This means that small changes can have large consequences and big changes might have hardly any effect - in complex systems there thus is no proportionality within the causal relations (Casti, 1994). This potential sensitivity of boards as complex adaptive systems to internal or external fluctuations, can easily lead to far-from-equilibrium states in which small changes have unintended consequences, leading to the spontaneous appearance of new dissipative structures (Dooley, 1997; Lichtenstein & Plowman, 2009; Smith & Gemmill, 1991).

Most of the behavioural corporate governance research to date avoid nonlinear relationships. In the often used model of Forbes and Milliken (1999) a still fairly simple, non-linear connection - an inverted U-shaped relationship between team cohesion and task performance of a board of directors – is included. In almost all empirical research based on this model however, this nonlinear relation is ignored, as Chapter 2 points out. The non-linearity of interactions is usually only touched upon in the discussion section, to explain the contingency of the found or not found correlations. Veltrop and others provide a typical example as they state in the discussion on their findings: "Indeed, our results suggest that a possible explanation for the ambiguous results for outside director tenure is that outside director tenure has nonlinear and contingent effects that are difficult to uncover at the board level of analysis" (2018: 17). Conceptualizing boards as complex adaptive systems enables us to move the field of behavioural corporate governance further and uncover this terra incognita of nonlinear and contingent effects.

A third characteristic of emergence in boards is that these local-level interactions and processes within the board give rise to emergent phenomena on *the group or global level*.
The global or macro level is the locus of emergent phenomena (Goldstein, 1999, 2013a). For boards as complex adaptive systems emergence is a group level dynamic and that implies that the board-level is also the place where the development of emergent states or patterns can be observed (Waller, Okhuysen, & Saghafian, 2016). It is therefore the place where research on boards as complex adaptive systems should be focused on, as Arrow and others argue: "[…] the matter of most interest to the researcher is the evolution over time of the group as a system, as evidenced in the trajectory over time of a given set of global variables for a given group as a system" (2000: 46).

A fourth characteristic of emergent states, patterns and structure is their *novelty and ostensiveness*. Goldstein (1999) even speaks of 'radical novelty'. Emergent phenomena are radically novel in his view because they are previously not observed at the local level. This novelty makes them unpredictable as they cannot be deduced from local-level determinants (Goldstein, 1999; Waller, Okhuysen, & Saghafian, 2016). Emergent phenomena in boards are novel in this sense – social cohesion, for instance, cannot be determined at the level of individual director interactions and is visible only when we look at the group as a whole, at the global level. They are not new in so far as they may be observed previously in other groups, and that makes them very difficult to predict rather than fundamentally unpredictable (Waller, Okhuysen, & Saghafian, 2016). The ostensiveness of emergent phenomena means that those phenomena are recognizable and visible at the global level (Goldstein, 1999). Waller and others define this ostensiveness as: 'the ability of team members to sense, experience, perceive, or react to an emergent phenomenon' (2016: 566-567). Not all emergent states seems to be equally ostensive for the observability of emergent phenomena in teams seems to vary among different emergent states (Carter, Carter, & DeChurch, 2018; Rapp, Maynard, Domingo, & Klock, 2021).

A last characteristic of emergence in boards is that it *arises* from local level interactions. This arising of emergence of radical novel states, patterns or structures is considered by some as almost a kind of magic: "Many of our most profound experiences of emergence come from those systems in which the local behaviour seems so entirely disconnected from the resulting aggregate as to have arisen by magic" (Miller & Page, 2007: 45). Future research should aim to dig deeper and unravel how the local level interaction brings forth emergence, revealing 'how emergents emerge' (Goldstein, 2014: 118). Not in a reductionist or mechanistic approach but from a focus on the dynamics of local level interaction, since emergent constructs can be regarded as the most dynamic conceptualizations in team research (Waller, Okhuysen, & Saghafian, 2016).

A research agenda to study boards as complex adaptive systems

In their review of research on teams as complex adaptive systems, Ramos-Villagrasa and others conclude that in recent decades this research has had only limited traction: "[…] mainstream research is predominantly plagued by linear thinking and chain-like cause-effect connections between pools of variables” (2018: 137). To study boards as complex adaptive systems, it is important to use research methods that actually reflect the complexity of boards as systems. As Jay Lorsch (2017: 40) warns us: “Too often […] lip service is given to the fact that the institutions are systemic, while the actual gathering and conceptualization of data ignores that fact”.

The focus on the dynamics of local interaction in complex systems however necessitates a quite different research methodology. First, we need to address the radical dynamic nature of complex adaptive systems, as Arrow and others argue: “The assertion that groups change over time and that this change typically involves the emergence of new regularities or patterns across time suggests that ‘snapshot’ observations of groups as a single point should not be taken as evidence of what that group was or will be like at an earlier or later period in its history” (2000: 40). Although a longitudinal study is more resource intensive, difficult and risky, it is a necessary step to move beyond oversimplified research designs in team effectiveness studies in general and board effectiveness in particular (Kozlowski, 2015; Van Ees, Gabrielsson, & Huse, 2009).

A focus on ‘what happened’ rather than on ‘what is’ (Roe, 2008), also allows one to not only map emergent phenomena within a board of directors, but also to sketch the patterns along which these phenomena develop over time. In particular, it also enables an exploration of the ways in which relatively stable phenomena such as emergent states change within a board of directors and how these changes relate to the effectiveness of boards. It also calls for research that goes beyond data from secondary sources, such as questionnaires and annual reports, to investigate such changes in emergent phenomena. It calls for research that also observes more directly the actual behaviour in boardrooms. The research in the previous chapters provides starting points and building blocks to further develop the research into board behaviour, as it provides a first insight into the complex interplay between conflict, cohesion, leadership and effectiveness.

PART III PRACTICAL IMPLICATIONS

The results of this thesis offer supervisory boards in educational organisations a better understanding of possibilities to increase their effectiveness in their yearly self-evaluations by focusing on their behaviour. In this regard, three main lessons can be drawn from the research in this thesis: Supervisory boards are teams, conflicts matter and cohesion is not the absence of conflict.

The first lesson that supervisory boards can learn from the research in this dissertation is that it clearly demonstrates that supervisory boards are not a loose collection of individuals but rather a team which, in order to perform at its best, also needs to work together as a team. Such cooperation is more about behaviour than it is about rules. Therefore, what ultimately matters for the effectiveness of a supervisory board is not the frequency of meetings of a supervisory board but the effort norms within the board, and it is not the availability of a sufficient number of diverse expertises but rather the use of that knowledge and those skills in the performance of the tasks of supervisory boards.

Supervisory boards are teams, though they are particular kind of teams that do not meet very often and that have a merely cognitive output. The research in this dissertation highlights how this necessitates supervisory boards to deal with conflicts in a different manner than other teams. While in many teams conflicts are harmful, this dissertation reveals that for supervisory boards in particular, conflict and even relationship conflicts are useful, as the complex challenges and the control task of supervisory boards requires them to be able to have a robust debate even - or particularly - if this leads to tensions and friction among them.

The second lesson that supervisory boards can thus draw from this dissertation is that conflicts matter and are an important driver of their effectiveness. And as Chapter 3 and 4 illustrate avoiding conflict is actually detrimental to their optimal functioning and that if sufficient togetherness and cohesiveness exists within a board, disagreements and friction will not prevent but enhance their ability to perform its tasks effectively.

Chapter 3 also highlights how process conflict between supervisory boards and the executive director negatively impacts the supervisory board's control task performance. Supervisory boards that are too busy discussing the degree to which they are in control and that argue with executives over what is whose task could well fall short of their monitoring tasks by either distancing themselves too much or because their executives get reluctant to adequately inform them in order to avoid detailed discussions about implementation issues (Cf. Heemskerk, Heemskerk, & Wats, 2017).

Allowing for a solid discussion requires a participative attitude from the chairman, to ensure different points of view are actually raised for discussion, and also requires the supervisory board as a team to be capable of managing conflicts of opinion and personality. Thus, the research in this thesis shows that participatory leadership and conflict management are important tools for ensuring that disagreement does not compromise the cohesion within the supervisory board.

The third lesson that supervisory boards can draw from the research in this dissertation, therefore, is that cohesion within a supervisory board is by no means the same as the absence of relationship conflicts. Cohesion rather contributes to a board’s capacity to avoid derailing conflicts and to perform effectively despite - or even thanks to - interpersonal incompatibilities.

As Chapter 4 particularly illustrates, the positive impact of task conflict is greater when cohesion in a supervisory school board rises. If both cohesion and task conflict drop, boards should be concerned about their control task performance. When members no longer get along and avoid substantial discussions to maintain peace, a board loses its effectiveness.

Ideally, a supervisory board fosters both cohesion and task conflict, as these can reinforce each other. When board members have good rapport, serious debate tends to strengthen their bond. Cohesion can even reverse the effects of relationship conflicts; boards with strong cohesion may find value in relationship conflicts. Thus, avoiding conflicts is not always advisable. Reduced friction only benefits the board's control task performance if cohesion increases; otherwise reduced conflict will only lead to poorer performance by the supervisory board.

In contrast, a highly cohesive board risks groupthink, where relationship conflicts might help by challenging consensus (Janis, 1982). For instance, a new, critical board member might irritate others but also provoke sharper discussions, ultimately improving board oversight of the executive director. Consequently, a sole focus on increasing cohesion is not recommended for supervisory school boards.

Supervisory boards are thus teams, requiring an optimal level of cohesiveness to reach the right decisions through tough and sometimes even abrasive disputes. An effective supervisory board knows how to fight the the good fight.

Appendix A

Overview of all survey items

A detailed overview of all constructs based on survey items used in Chapters 3, 4 and 5 is presented in this appendix. Items based on previous research are followed by a reference tot the original research. Crossed-out survey items were excluded from the survey based on a pre-test. Double crossed-out items were excluded from analysis based on reliability testing (EFA and Cronbach's alpha). Items followed by an R were reverse coded. Reported values of Cronbach's alpha are based on the included items. All items were measured on a seven point Likert scale. The survey was distributed and conducted through Qualtrics.

The original Dutch items are also presented. Based on the pre-test, I opted to refer to the members of the supervisory board (*leden van de raad van toezicht*) rather than the more formally correct members of the internal supervision (*leden van het intern toezicht*) as this is more in line with practice and avoids misunderstandings (e.g. confusion with the role of the controller).

Effort

Definition:
Effort refers to the amount of time and energy individual group members invest in their duties.

Operationalisation:

1 All board members demonstrate their commitment to our team by putting in extra time and effort if necessary to help it succeed (cf. Wageman, Hackman et al. 2005).

2R Some board members of our team do not carry their fair share of the overall workload (cf. Wageman, Hackman et al. 2005).

~~3 All board members make an effort to research issues that are relevant to our company (cf. Forbes, Milliken 1999, Bailey, Peck 2011).~~

4 All board members carefully scrutinizing the information provided by the firm prior to our meetings (cf. Forbes, Milliken 1999)

5R Some board members are not engaged during board meetings (cf. Bailey, Peck 2011).

6 All board members prioritize substantial and enough time regarding their assignment as board members in the firm (cf. Sellevoll, Huse et al. 2007)

Dutch survey items:
De leden van de raad van toezicht …

1 … investeren indien nodig extra energie om de raad van toezicht te doen slagen.
2 … dragen evenredig bij.
4 … bestuderen de vergaderstukken aandachtig voorafgaand aan de bijeenkomsten.
5R … tonen zich tijdens de bijeenkomsten nauwelijks betrokken.
6 … maken voldoende tijd vrij voor hun taak als toezichthouder.

Cronbach's Alpha

CONSTRUCT	ITEMS	ALPHA 2016	ALPHA 2017	ALPHA 2018
Effort	5	0,837	0,819	0,804

The use of knowledge & skills

Definition:
The use of knowledge and skills refers to the extent to which a board is able to put the knowledge and skills it features to use in its fulfillment of its tasks (Forbes, Milliken 1999).

Operationalisation:

~~1 When an issue is discussed, the most knowledgeable board members generally have the most influence (cf. Forbes, Milliken 1999).~~

2R How seriously a board member's ideas are taken by others on our board often depends more on who the person is than on how much he or she actually knows (cf. Wageman, Hackman et al. 2005).

3 Members of our board actively share their special knowledge and expertise with one another (cf. Wageman, Hackman et al. 2005).

~~4R Board members sometimes withhold important information on this board (cf. Forbes, Milliken 1999)~~

5 The task delegation on this board represents a good match between knowledge and responsibilities (cf. Forbes, Milliken 1999).

~~6 All board members have a good understanding of the skills and capabilities of the other board members (cf. Bailey, Peck 2011).~~

~~7 When controversial decisions are to be made the board listens mostly to member with the most knowledge and experience on the issue (cf. Sellevoll, Huse et al. 2007)~~

Dutch survey items:
Binnen de raad van toezicht …

2R … bepaalt je persoonlijkheid, meer dan je kennis van zaken, of je serieus genomen wordt.
3 … delen de leden actief hun specifieke kennis en expertise met elkaar.
5 … vormt de taakverdeling een goede match tussen kennis en verantwoordelijkheden.
~~6 … hebben de leden inzicht in de vaardigheden en capaciteiten van de andere toezichthouders.~~
~~7 … luistert men, wanneer er lastige besluiten moeten worden genomen, meestal naar het lid/de leden met de meeste kennis over het onderwerp.~~

Cronbach's Alpha

CONSTRUCT	ITEMS	ALPHA 2016	ALPHA 2017	ALPHA 2018
The use of knowledge & skills	3	0,894	0,873	0,853

Intragroup task conflict

Definition:
Intragroup task conflict refers to the disagreement between board members about the content of the tasks to be performed, due to differences in viewpoints, ideas and opinions (Jehn 1995)
As Bendersky and others (2010) argue, there are two different, often mixed, operationalisation of task conflicts, either as divergent task conflicts (discussing additional options and alternatives) or as convergent task conflicts (disagreement on a joint decision or solution). In my definition I chose to focus solely on the divergent operationalisation, for the diverging effect is what makes task conflict possibly enhance performance. Since task conflicts as a process are more behavioural than cognitive, the operationalisation aims at the actual behaviour and not the perceived level of task conflict (cf. Bendersky, Bear et al. 2014)

Operationalisation:
~~1 How many differences of opinion were there within the board (cf. Jehn 1995)~~
~~2R Board member think and reason in similar ways (cf. Sellevoll, Huse et al. 2007)~~
3 The board as a team is able to reach collectively shared decisions following full and frank debate (McNulty, Florackis et al. 2013, cf. Bailey, Peck 2011).
4 Board members constructively challenge and debate the issues at hand (cf. Bailey, Peck 2011).
~~5R Board members seldom change opinion even if the issue is subject to rational reasoning (cf. Sellevoll, Huse et al. 2007)~~
~~6 How many differences about the content of decisions did the board have to work through (cf. Jehn 1995)~~

Dutch survey items:
Hoe vaak …
~~1 … verschillen leden van de raad van toezicht van mening.~~
~~2R … blijken leden van de raad van toezicht op dezelfde manier te redeneren.~~
3 … is de raad van toezicht in staat om collectief gedeelde besluiten te nemen over lastige kwesties na een open en uitgebreide discussie.
4 … bediscussiëren de leden van de raad van toezicht onderling constructief de kwesties die spelen.
~~5R … veranderen leden van de raad van toezicht van mening na een inhoudelijke discussie.~~

Cronbach's Alpha

CONSTRUCT	ITEMS	ALPHA 2016	ALPHA 2017	ALPHA 2018
Intragroup task conflict	2	0,828	0,824	0,788

Intragroup relationship conflict

Definition:
Intragroup relationship conflicts are conflicts within the board that are driven by interpersonal incompatibilities resulting in tension, animosity and annoyance among board members (Jehn 1995). *The distinction between task and relationship conflict is not a distinction between rational and emotional conflict, since the aspect of emotion is present in all conflict types (Bendersky, Behfar et al. 2010). The items are based on the Intragroup Conflict Scale (ICS) developed by Jehn (1995) and assessed by Pearson and others (2002). Recent research argued to further improve the wording of the ICS-items from Jehn (1995) and to include status and commitment as dimensions of relationship conflicts (Bendersky, Bear et al. 2014, Bendersky, Behfar et al. 2010). Since commitment is included as effort. Only status-conflict items are added based on the items in Bendersky and others (2010).*

Operationalisation:

~~1 How often is personal friction visible in the board during decision-making (cf. Jehn 1995)~~
2 How often is anger visible among the members of board (cf. Jehn 1995)
3 How often is tension visible among board members during decision-making (cf. Jehn 1995)
4 How often do board members try to assert their dominance over other members (cf. Bendersky, Behfar et al. 2010)
5 How often do board members compete for influence (cf. Bendersky, Behfar et al. 2010)

Dutch survey items:
Hoe vaak …

2 … is er boosheid zichtbaar tussen de leden van de raad van toezicht.
3 … is er spanning zichtbaar tussen de leden van de raad van toezicht.
4 … proberen leden de raad van toezicht zich ten koste van andere leden te laten gelden.
5 … strijden leden van de raad van toezicht met elkaar om invloed op de besluitvorming.

Cronbach's Alpha

CONSTRUCT	ITEMS	ALPHA 2016	ALPHA 2017	ALPHA 2018
Intragroup relationship conflict	4	0,898	0,921	0,906

Intragroup process conflict

Definition:
Intragroup process conflicts are differences of opinion on how to perform a task within the board (Jehn 1997)

Operationalisation:
~~1 Board members often disagree about who should do what (cf. Jehn, Mannix 2001).~~
2 Board members often want to discuss issues that are not on the agenda (cf. Sellevoll, Huse et al. 2007)
3 Board members often debate the filling and chairing of board committees.
4 Board members often debate the decision-making procedure within the board.
~~5 Board members often debate the order of items on the agenda of the board meeting.~~

Dutch survey items:
Hoe vaak …
2 … willen leden van de raad van toezicht kwesties bespreken die niet op de agenda staan.
3 … hebben leden van de raad van toezicht onderling onenigheid over de invulling en het voorzitterschap van de commissies binnen de raad van toezicht.
4 … zijn leden van de raad van toezicht het oneens over de manier waarop besluiten van de raad van toezicht tot stand komen.

CONSTRUCT	ITEMS	ALPHA 2016	ALPHA 2017	ALPHA 2018
Intragroup process conflict	3	0,698	0,450	0,439

Board-CEO task conflict

Definition:
Board-CEO task conflict refers to the disagreement between the board members and the CEO/executives about the content of the executive tasks to be performed, due to differences in viewpoints, ideas and opinions (Jehn 1995).

Operationalisation:

~~1 How many differences of opinion were there between the board and the CEO/executives (cf. Jehn 1995)~~

~~2R Board members and the CEO/executives think and reason in similar ways (cf. Sellevoll, Huse et al. 2007)~~

3 Board members constructively challenge and debate the issues raised by the CEO/executives (cf. Bailey, Peck 2011).

4 Board members often share their disagreements and concerns with the CEO/executives (cf. Bailey, Peck 2011).

~~5 How many differences about the content of decisions did the board and the CEO/executives have to work through (cf. Jehn 1995)~~

Dutch survey items:
Hoe vaak …

~~1 … verschillen leden van de raad van toezicht en de bestuurder van mening.~~

~~2R … blijken leden van de raad van toezicht en de bestuurder op dezelfde manier te denken en redeneren.~~

3 … bevragen en bediscussiëren de leden van de raad van toezicht constructief de kwesties die door de bestuurder worden geagendeerd.

4 … delen leden van de raad van toezicht hun zorgen en bezwaren met de bestuurder.

CONSTRUCT	ITEMS	ALPHA 2016	ALPHA 2017	ALPHA 2018
Board-CEO task conflict	2	0,762	0,540	0,718

Board-CEO relationship conflict

Definition:
Board-CEO relationship conflicts are conflicts between the board and the CEO/executives that are driven by interpersonal incompatibilities resulting in tension, animosity and annoyance between board members and the CEO/executives (Jehn 1995).

Operationalisation:

~~1 How often is personal friction visible between board members and the CEO/executives during decision-making (cf. Jehn 1995)~~

2 How often is anger visible between board members and the CEO/executives (cf. Jehn 1995)

3 How often is tension visible between board members and the CEO/executives during decision-making (cf. Jehn 1995)

Dutch survey items:
Hoe vaak …

2 … is er boosheid zichtbaar tussen de leden van de raad van toezicht en de bestuurder.

3 … is er spanning zichtbaar tussen de leden van de raad van toezicht en de bestuurder.

CONSTRUCT	ITEMS	ALPHA 2016	ALPHA 2017	ALPHA 2018
Board-CEO relationship conflict	2	0,848	0,908	0,883

Board-CEO process conflict

Definition:
Board-CEO process conflicts are differences of opinion on how to perform a task between board members and the CEO/executives (Jehn 1997)

Operationalisation:

~~1 The CEO/executives often disagree with the board about who should do what (cf. Jehn, Mannix 2001).~~

2 The CEO/executives often debate the filling and chairing of board committees.

3 Board members often debate with the CEO/executives the decision-making procedure within the board.

~~4 The CEO/executives often debate the order of items on the agenda of the board meeting.~~

Dutch survey items:
Hoe vaak …

2 … zijn leden van de raad van toezicht en de bestuurder het oneens over de invulling en het voorzitterschap van de commissies binnen de raad van toezicht.

3 … zijn leden van de raad van toezicht en de bestuurder het oneens over de manier waarop besluiten van de raad van toezicht tot stand komen.

CONSTRUCT	ITEMS	ALPHA 2016	ALPHA 2017	ALPHA 2018
Board-CEO process conflict	2	0,681	0,650	0,662

Conflict management

Definition:
Conflict management refers to the extent in which a board actively and effectively manages the intragroup conflicts within the board by using an cooperative conflict managing style.
The literature outlines two ways in which conflict management can be approached (Tekleab, Quigley et al. 2009). The first approach uses a team process approach and investigates the extent to which teams manage their conflicts actively (Marks, Mathieu et al. 2001, Jehn 1995). A Second approach describes a variety of classifications of conflict management styles (Rahim 1983). The latter often uses the dual concern model of Blake and Mouton (1964) to put effective conflict management styles versus less effective or adverse styles (e.g.Pruitt 1983, Rahim 1983). Overall this research tends to recommend 'cooperation' or 'problem-solving' above the other conflict management styles, such as 'avoidance', 'fighting', 'withdrawal' and 'yielding' (cf. Forsyth 2010, p. 403). Although yielding or avoidance can be effective in certain groups in certain contexts for it makes group members ignore conflict to focus on the work to be done (De Dreu, Van Vianen 2001), avoidance and yielding are harmful in the context of boards since the work to be done in boards is entirely cognitive and more strategic than productive. I combine both approaches in defining conflict management.

Operationalisation:
1 Conflict is dealt with openly on this board (c.f.Tekleab, Quigley et al. 2009).
2 If conflict arises on this board, the members involved in the conflict initiate steps to resolve the conflict immediately (cf. Tekleab, Quigley et al. 2009).
3 This board knows what to do when conflicts between board members arise (c.f.Tekleab, Quigley et al. 2009).
4 This board is able to avoid the negative aspects of conflict before they occur (c.f.Tekleab, Quigley et al. 2009).
5 Board members try to investigate an issue of conflict together to find a solution acceptable to all (c.f. Rahim 1983).
~~6 Board member work together for a proper understanding when an issue leads to conflict (c.f. Rahim 1983).~~

Dutch survey items:
Binnen onze raad van toezicht …[2]
1 … bespreken de leden open hun onderlinge conflicten.
2 … nemen de bij een ontstaan conflict betrokken leden het initiatief om het conflict zo snel mogelijk op te lossen.
3 … weten de leden wat te doen wanneer onderling conflicten ontstaan.
4 … zijn de leden in staat om vroegtijdig de eventuele negatieve effecten van meningsverschillen te vermijden.
5 … bespreken de leden een meningsverschil over een bepaald onderwerp gezamenlijk ten einde een voor iedereen aanvaardbare oplossing te vinden.

CONSTRUCT	ITEMS	ALPHA 2016	ALPHA 2017	ALPHA 2018
Conflict management	5	0,905	0,938	0,938

[2] With this item, the option was included to choose 'not applicable: there are never any conflicts within our supervisory board' and skip these items.

Board cohesion

Definition:
The cohesion within a board is a group-level construct (Hogg 1993) that refers to both the *social* cohesion, the attraction of members to the group and the *task* cohesion, the willingness to work with the group to accomplish shared objectives (Carron, Brawley 2000).

Operationalisation:
A selection of six relevant items of the Group Cohesion Scale Revised (GCS-R) (Treadwell, Lavertue et al. 2001, Knight, Hunsinger 2009) adapted to the context of boards to measure social cohesion:
1 There are positive relationships among the board members (GCS-R 2).
2 There is a feeling of unity and togetherness among board members (GCS-R 3).
3 The board members seem to be aware of the group's unspoken rules (GCS-R 10)
~~4 Despite tensions, members of this board tend to stick together (GCS-R 14).~~
5R An unhealthy competitive attitude appears to be present among board members (GCS-R 16).

A selection of four relevant items of Group Integration-Task part of the Group Environment Questionnaire (GEQ) (Boyle 2003, Carron, Widmeyer et al. 1985) adapted to the context of boards to measure task cohesion:
6 Our board is united in trying to reach its goals (GEQ 10)
7 We all take responsibility for any failure or poor performance by our board (GEQ 12)

Dutch survey items:
1 De onderlinge relaties binnen de raad van toezicht zijn goed.
2 Er is een gevoel van eenheid en saamhorigheid onder de leden van de raad van toezicht.
3 De leden van de raad van toezicht lijken zich bewust te zijn van de ongeschreven regels binnen de groep.
5R De leden van de raad van toezicht lijken soms een ongezond competitieve houding aan te nemen.
6 De leden van de raad van toezicht zijn één en verenigd in hun poging om de gezamenlijke doelen te bereiken.
7 De leden van de raad van toezicht nemen allemaal de verantwoordelijkheid voor eventuele fouten of slechte prestaties door de raad van toezicht.

CONSTRUCT	ITEMS	ALPHA 2016	ALPHA 2017	ALPHA 2018
Board cohesion	6	0,878	0,840	0,856

Board Chair Participative Leadership

Definition:
Board Chair Participative Leadership refers to a board chair's openness to all board members' input in the decision-making process'. Items are based on the ELQ-items on Participative Decision-Making (Arnold, Arad et al. 2000).

Operationalisation:
The Board Chair …
1 … encourages board members to express ideas/suggestions (ELQ PDM-1)
2 … listens to the board's ideas and suggestions (ELQ PDM-2)
3 … uses the board's suggestions to make decisions (ELQ PDM-3)
4 … gives all board members a chance to voice their opinions (ELQ PDM-4)
5 … considers the board's ideas when he/she disagrees with them (ELQ PDM-5)
~~6R … makes decisions that are based only on his/her own ideas (ELQ PDM-6)~~
~~7 … encourages participation of board members~~

Dutch survey items:
De voorzitter van de raad van toezicht …
1 … moedigt de leden van de raad van toezicht aan om ideeën of suggesties te uiten
2 … luistert naar ideeën en suggesties van de leden van de raad van toezicht
3 … maakt gebruik van de suggesties van de raad van toezicht om beslissingen te nemen
4 … geeft alle leden van de raad van toezicht de kans hun mening te geven
5 … neemt de suggesties van leden van het intern toezicht in overweging, ook als hij of zij het niet met hen eens is

CONSTRUCT	ITEMS	ALPHA 2016	ALPHA 2017	ALPHA 2018
Board Chair Participative Leadership	5	0,901	0,950	0,941

Control task performance

Definition:
The control task performance refers to a board's ability to perform its control task effectively (Forbes, Milliken 1999)

Operationalisation:
1 The extent to which the board actively supervises the CEO/executives on a range of sector-relevant topics (finance, output, strategic/long-term planning etc.).
2 The extent to which the board actively acts as the employer of the CEO.

Dutch survey items:
1-6 In welke mate ziet uw raad van toezicht actief toe op …
… het onderwijskwaliteitsbeleid
… de verantwoording aan externe stakeholders
… het financieel beleid binnen de instelling
… het personeelsbeleid
… het onderwijshuisvestingsbeleid
… de missie en visie van de instelling
7 In welke mate treedt de raad van toezicht actief op als de werkgever van de bestuurder.
8 In welke mate houdt de raad van toezicht adequaat toezicht op het functioneren van de bestuurder.

CONSTRUCT	ITEMS	ALPHA 2016	ALPHA 2017	ALPHA 2018
Control task performance	8	0,856	0,830	0,789

Service task performance

Definition:
The service task performance refers to a board's ability to perform its service task effectively (Forbes, Milliken 1999). In line with Huse (2005) strategy as a board task is integrated in both service and control task of the board. Advisory and networking task are specific forms of service and are thus included in the service task performance.

Operationalisation:

1 The extent to which the board actively advises the CEO/executives on a range of sector-relevant topics (finance, educational quality, strategic/long-term planning etc.).

~~2 The extent to which the board is, with great authority, involved in the evaluation of a range of sector-relevant topics (finance, educational quality, strategic/long-term planning etc.) (cf. Sellevoll, Huse et al. 2007)~~

3 The board and its board members act as mentors for the CEO and the organization (cf. Sellevoll, Huse et al. 2007)

4 The organization and the CEO/executives often take advantage of the board members' networks for advice (cf. Sellevoll, Huse et al. 2007).

Dutch survey items:

1-6 In welke mate adviseert uw raad van toezicht u over …
… het onderwijskwaliteitsbeleid
… de verantwoording aan externe stakeholders
… het financieel beleid binnen de instelling
… het personeelsbeleid
… het onderwijshuisvestingsbeleid
… de missie en visie van de instelling

7 In welke mate fungeert de raad van toezicht als sparringpartner voor de bestuurder en organisatie

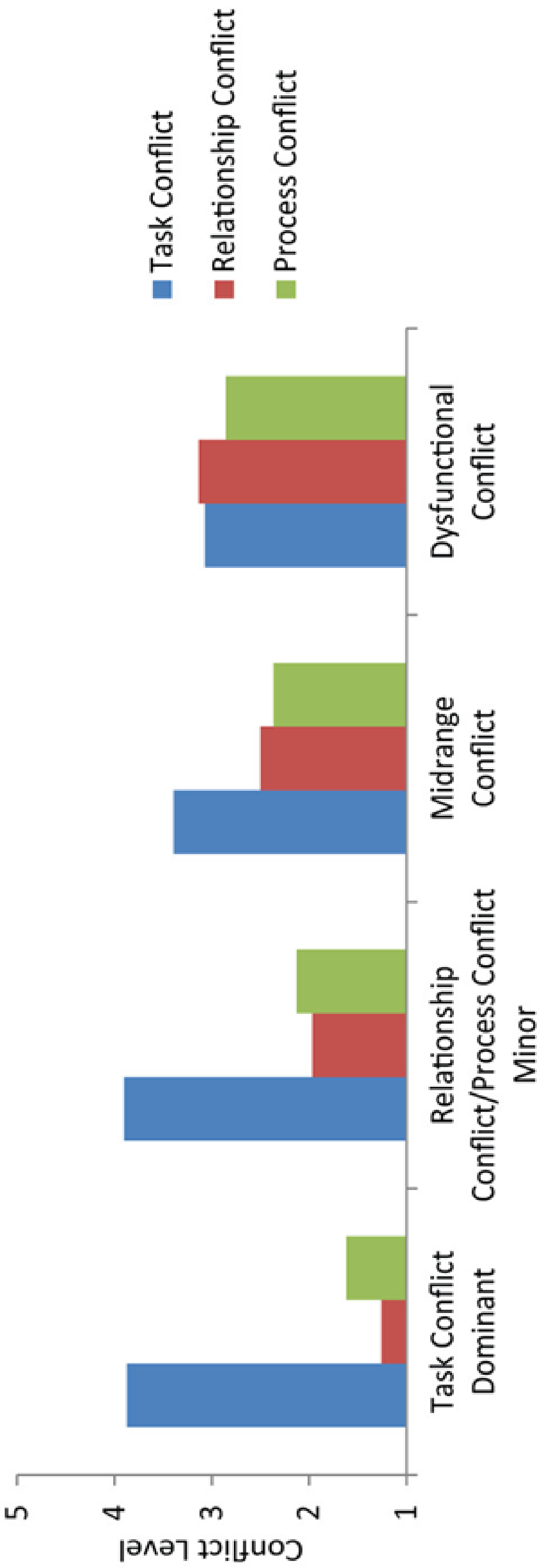
8 In welke mate is de raad van toezicht door netwerken van dienst voor de bestuurder en organisatie

9 In welke mate is de raad van toezicht een belangrijke adviseur voor de bestuurder

CONSTRUCT	ITEMS	ALPHA 2016	ALPHA 2017	ALPHA 2018
Advisory task performance	9	0,898	0,908	0,882

Appendix B

Figure 1. Conflict Profiles Representing the Four Classes Extracted by the Latent Profile Analysis reproduced from O'Neill, McLarnon, Hoffart, Woodley & Allen (2018)



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