Relational contracting in Nordic construction – a comparative longitudinal account of institutional field developments

Citation for the original published paper (version of record):
Kadefors, A., Aaltonen, K., Gottlieb, S. et al (2024). Relational contracting in Nordic construction – a comparative longitudinal account of
institutional field developments. International Journal of Managing Projects in Business, 17(8): 22-46. http://dx.doi.org/10.1108/IJMPB-01-2024-0014

Received 18 January 2024
Revised 25 March 2024
Accepted 25 March 2024

Relational contracting in Nordic construction – a comparative longitudinal account of institutional field developments

Anna Kadefors
Department of Real Estate and Construction Management, Royal Institute of Technology, Stockholm, Sweden and Department of Technology Management and Economics, Chalmers University of Technology, Gothenburg, Sweden
Kirsi Aaltonen
Department of Industrial Engineering and Management, Faculty of Technology, University of Oulu, Oulu, Finland
Stefan Christoffer Gottlieb
Department of the Built Environment, Aalborg University, Copenhagen, Denmark
Ole Jonny Klakegg
Department of Civil and Environmental Engineering, Norwegian University of Science and Technology, Trondheim, Norway
Pertti Lahdenperä
VTT Technical Research Centre of Finland Ltd, Tampere, Finland
Nils O.E. Olsson
Department of Mechanical and Industrial Engineering, Norwegian University of Science and Technology, Trondheim, Norway
Lilly Rosander
Department of Real Estate and Construction Management, Royal Institute of Technology, Stockholm, Sweden, and
Christian Thuesen
Department of Engineering Technology, Technical University of Denmark, Lyngby, Denmark

Abstract

Purpose – Relational contracting is increasingly being applied to complex and uncertain construction projects. However, it has proved hard to achieve stable performance and industry-level learning in this field. This paper employs an institutional perspective to analyze how legitimacy for relational contracting has been

Swedish Transport Administration under Grant TRV2016/102179; and FORMAS (government research council for sustainable development), under Grant [254-2013-1837].

International Journal of Managing Projects in Business
Vol. 17 No. 8, 2024
pp. 22-46
Emerald Publishing Limited
1753-8378
DOI 10.1108/IJMPB-01-2024-0014

produced and challenged in Denmark, Finland, Norway and Sweden, including implications for dissemination and learning.

Design/methodology/approach – A collaborative case study design is used, where longitudinal accounts of the developments in relational contracting over more than 25 years in four Nordic countries were developed by scholars based in each country. The descriptions are underpinned by literature sources from research, practice and policy.

Findings – The countries share similar problem perceptions that have triggered the de-institutionalization of traditional contracting practices. Models and policies developed elsewhere are important sources of knowledge and legitimacy. Most countries have seen pendulum movements, where dissemination of relational contracting is followed by backlashes when projects fail to meet projected outcomes. Before long, however, relational contracting tends to re-emerge under new labels and in slightly new forms. Such a proliferation of concepts presents further obstacles to learning. Successful institutionalization is found to rely on realistic goals in combination with broad competence development at the organizational and industry levels.

Practical implications – In seeking inspiration from other countries, policymakers should go beyond contract models to also consider strategies to manage industry-level learning.

Originality/value – The paper provides a unique longitudinal cross-country perspective on the field of relational contracting. As such, it contributes to the small stream of literature on long-term institutional change in the construction sector.

Keywords Legitimacy theory, Infrastructure, ECI, Alliances, IPD, Partnering, Institutionalization, Procurement

Paper type Research paper

Introduction

Traditional contracts for construction projects are typically based on linear, transitory relay race logic where design and construction are separated in terms of both responsibility and time. In this model, contractors are paid a fixed sum for a specified performance, either in the form of detailed specifications or as functional requirements, and contracts are awarded on a lowest bid basis. Additional work that stems from errors in the contract specifications, unforeseen circumstances or other changes ordered by the client are priced on a cost-plus basis. This implies that contractors may submit an unreasonably low bid and anticipate that they will still be able to make a profit through changes during the contract period (so called "bid low-claim high" strategies). Thus, fixed price contracts tend to result in poor collaboration and distrust between client and the contractors, especially in projects that are complex, risky and uncertain. It is generally agreed that such projects call for flexible contracting models that allow for knowledge sharing and iterative joint innovation processes (Eriksson, 2010).

Since the 1980s, various contracts and delivery models aiming to support collaboration have emerged, often traced back to the quality movement in Japan and developments in the offshore industry (Lahdenperä, 2012). Here, we use the term relational contracting as an umbrella concept for all such models. Typically, they rely on a combination of "hard" contractual elements, such as early involvement of contractors, shared risks and quality-based selection and "soft" elements, primarily joint governance processes for building relationships and managing risks and opportunities, often led by facilitators (Eriksson, 2010; Lahdenperä, 2012; Hosseini *et al.*, 2018; Engebø *et al.*, 2020). It is common to use a two-stage contract model, where in the first stage the design and a target cost are developed in collaboration by the partners. Then, a contract is signed for the detailed design and construction stage. Contracts may either involve two parties, sometimes further cascaded to key partners in the supply chain, or there may be one joint multiparty arrangement. Payment models are often based on cost transparency (open books), but incentive arrangements and risk allocation vary.

In some countries, relational contracting models have become quite standard practice, sometimes supported by government policies, or used by government clients. In the UK, relational contracting, initially mostly referred to as partnering, has been a key part of

industry reform initiatives since the 1990s (Bresnen and Marshall, 2000; Winch and Maytorena-Sanchez, 2020; Oti-Sarpong *et al.*, 2021; Bresnen and Lennie, 2023). Today, such methods are endorsed by the UK government Construction Playbook procurement strategy, as well as by the industry development initiative Project 13, launched by the Infrastructure Clients Group (Bresnen and Lennie, 2023). In Australia, multiparty alliancing was initiated in the 1990s and used in government construction projects (Walker and Lloyd-Walker, 2015; Gerber and Misko, 2019). In the USA, Integrated Project Delivery (IPD), with a special focus on digital tools, emerged in the late 2000s (Hall and Scott, 2019). Early Contractor Involvement (ECI) is a broader label used in multiple contexts worldwide (Farshid *et al.*, 2018; Wondimu *et al.*, 2020). Long-term strategic partnering/partnerships (Gottlieb *et al.*, 2020; Berg *et al.*, 2022) are included as well. Despite a dip after the financial crisis and a backlash for alliancing in Australia (Gerber and Misko, 2019), the broad trend seems to be that relational contracting is gaining momentum on a global level (Mosey, 2019). One indication is that the International Federation of Consulting Engineers (FIDIC) is currently developing a standard contract for collaborative relationships. Moreover, digitalization and efforts to tackle pertinent social and environmental goals, not least climate change, has been linked to an increased use of more collaborative and integrated delivery models (Whyte, 2019; Kadefors *et al.*, 2021), even though this change has not taken place as rapidly as has been expected (Oti-Sarpong *et al.*, 2021).

On the policy level, relational contracting has often come with high ambitions, perhaps especially for cost reductions (Bresnen and Marshall, 2000; HM Government, 2013). There are certainly many examples of successful applications, and it is important to acknowledge that relational contracting is often applied for complex projects where traditional methods are less suitable and for which contractors might not bid if a traditional contract is chosen. However, looking at the performance over time on an international level, the high expectations have proved hard to fulfill on a broader scale, often causing criticism and backlashes (Mollaoglu *et al.*, 2015; Gerber and Misko, 2019; Rosander and Kadefors, 2023). Indeed, relational contracting and traditional (transactional) contracts may be seen as two contradictory and perpetually competing modes of exchange, where legitimacy shifts over time in favor of one or the other (Winch and Maytorena-Sanchez, 2020). Further, there has been a conceptual proliferation and ambiguity in operationalizing relational contracting. Models developed in one geographical context have frequently inspired initiatives in other places (Lahdenperä, 2012) and in these translation processes, the definition of the labels in terms of detailed practices often change. The same may happen over time in the same context (Hall and Scott, 2019). In sum, despite the growing experience with – and need for – flexible and collaborative contracting models, it seems that the industry often fails to capture the knowledge gained and use it to effectively inform systematic learning in contracting practice over time.

However, since the paper by Lahdenperä (2012), there has been scarce research with a longitudinal, comparative perspective, aiming at understanding long-term industry-level transition in this field (Qiu and Chen, 2022). In this paper, we contribute to filling this gap by mapping and analyzing the development in relational contracting over 30 years in four Nordic countries: Denmark, Finland, Norway and Sweden. The conceptual framework is based on institutional theory, where relational contracting is analyzed as a potential new institutional practice in the construction sector. In particular, we focus on how legitimacy of relational contracting has been produced and challenged within the institutional field of construction and implications for dissemination and learning.

Theoretical framework

Institutions have been described as "regulative, normative and cultural-cognitive elements that, together with associated activities and resources, provide stability and meaning to social

life" (Scott, 2008, p. 48). Institutionalization thus implies a process where such elements become more homogeneous across a broader field in society. Formal regulations may be important, but also informal pressures, intentional and goal-oriented efforts by strong groups and imitation between organizations (DiMaggio and Powell, 1983). Institutions function as patterns for actions and, thereby, permit us to make predictions concerning future behaviors of other people. Such shared expectations reduce the cost of information processing, facilitate the coordination of different activities and provide psychological security (Powell, 1991).

Institutional change and entrepreneurship

Pressure to change institutional orders often follow from disturbances or disruptions at the societal, macroeconomic level, causing a growing dissatisfaction with the existing system (Greenwood *et al.*, 2002). Examples of such disorders are political turmoil, resource shortages, regulatory changes, or technological developments. Environmental changes open for de-institutionalization and for institutional pluralism and complexity (Micelotta *et al.*, 2017).

In their conceptualization of the route of institutional change, Greenwood *et al.* (2002) outline a process with several steps. First, they claim that institutional changes need to be "theorized". This includes both "specification", which implies that the problems with the existing institutional order are identified and described and "justification", which explains why the new institution is more appropriate and how it will solve the problem. There is often a period of "preinstitutionalization" in which organizations innovate independently to find solutions to locally perceived problems. Theorizing also includes that such locally derived solutions are translated to more abstract and simplified entities suitable and available for wider adoption (Greenwood *et al.*, 2002). Successful theorization and objectification lead to diffusion, if there is social consensus around the functional value of the new institution (Suchman, 1995).

In recent years, research has increasingly focused on institutional change driven by individuals and organizations acting as institutional entrepreneurs (Battilana *et al.*, 2009) performing institutional work (Lawrence and Suddaby, 2006). Such change agents enter the field when a social, technological, or regulatory change has destabilized the existing order. They bring in new ideas and have important roles in theorizing the proposed change. Institutional entrepreneurs need to mobilize both allies and resources. Thus, there is a complication in that change initiatives often come from actors in the periphery, who have less stakes in the status quo, while broader diffusion requires that the most dominant and resourceful actors adopt the new practices.

Especially in mature fields, it is easier to gain support for changes that are not too radical and do not require substantial changes in the roles, competencies and resources of established actors (David *et al.*, 2013). Ansari *et al.* (2010) suggest that a new managerial practice that can lend itself to multiple interpretations has a greater likelihood of adoption, however with greater variation and lower fidelity to the source model. Managerial innovations thus spread if they are adaptable, require low investments and are easy to understand. However, not all new ideas make it all the way to full institutionalization and may instead fade away as managerial fashions and fads (Abrahamson, 1991).

Legitimacy of the new institution

An important concept in institutional theory is legitimacy. Suchman (1995) and Deephouse *et al.* (2017) identify three primary forms of organizational legitimacy: pragmatic, based on audience self-interest; moral, based on normative approval; and cognitive, based on comprehensibility and taken-for-grantedness. A practice may thus be perceived as legitimate if it is seen as a useful way to solve a problem, considered appropriate or morally acceptable and is easy to understand or (in the case of an established institution) already taken for granted. Imitation is a

way of gaining legitimacy. Thus, organizations sometimes adopt new practices mainly for reasons of legitimacy and reputation rather than because of their pragmatic value (Meyer and Rowan, 1977). Deephouse *et al.* (2017) further stress that legitimacy evaluation comes from different sources and that legitimization is a continually evolving process.

Studies of institutional entrepreneurs have shown that their power to drive change is strongly dependent on if they are perceived as legitimate and knowledgeable. Although such actors are often driven by self-interest, David *et al.* (2013) find that legitimacy of a new practice is increased if the institutional entrepreneur emphasizes altruism, especially if outcomes of the change are intangible and hard to assess.

Institutional change in construction

The construction sector is highly institutionalized and the resistance to change is strong (Oti-Sarpong *et al.*, 2021). Although projects are unique, they interact with their environments: professional roles, organizational structures and project governance modes are shaped by the institutional order in the field (cf. Bechky, 2006). Such institutionalization is important to economize on transaction costs and coordination needs in temporary, unique construction project organizations (Kadefors, 1995). Typically, the freedom at the project level to initiate new practices is relatively high, while organizational level structures to transfer the knowledge gained to other projects are weak. However, the strong institutional order also means that construction projects may connect directly to structures and learning processes at the industry level and so bypass a thin and perhaps unsupportive organizational level. On the system level, knowledge can be reflected in guidelines and collaborative standards (By-og Boligministeriet, 1998), professional roles and consultancy services and benchmarking programs (Aaltonen and Turkulainen, 2022). Industry networks may play an important role in institutionalizing new relational contracting approaches by building the field/industry-level receptivity, codifying the new delivery forms and consolidating legitimation toward multiple audiences (cf. Huybrechts and Haugh, 2018). Further, large projects with high visibility may invest in developing new methods and lead by example to produce institutional change (Davies *et al.*, 2019; Matinheikki *et al.*, 2019; Winch and Maytorena-Sanchez, 2020; Aaltonen and Turkulainen, 2022).

Research themes

This paper reassumes the discussion of how industry-level institutional change takes place in the construction sector, taking a long term, cross-country perspective on institutionalization processes – and absence thereof – in the field of relational contracting. Based on theories of institutional change, we derive the following research themes:

(1) Triggers of de-institutionalization (theorizing/specification): How have problems with the existing institutional order been perceived and described? Are there critical incidents that have triggered de-institutionalization?

(2) Agency and institutional entrepreneurship: Which actors have been important in promoting and impeding change? Are there institutional entrepreneurs?

(3) Building legitimacy for new contracting methods (theorizing/justification): How are new solutions to the problems found and legitimized? Which legitimacy problems have occurred over time?

(4) Dissemination and learning: Which are the patterns of dissemination and learning at a broader institutional level over longer time?

Method

The research approach used for this paper is phenomenon-driven (von Krogh *et al.*, 2012; Schwarz and Stensaker, 2014). This implies that the point of departure is an empirical phenomenon, which is new or insufficiently understood and that the selection of study method and theoretical underpinning is driven by the objective to establish a deeper and more adequate understanding of the phenomenon.

We use a collaborative case study design, including cases built by different scholars (George and Bennett, 2005). The paper is based on longitudinal accounts of the developments over time in relational contracting in each of the four countries. This process is hard to capture by conventional research methods, since there are generally no statistics available, and the development has taken place over a long time and involved a wide range of organizations and individuals. Our approach is inspired by Alvesson and Sandberg (2022), who argue that the knowledge of various organizational phenomena that experienced researchers have accumulated through their personal experiences should be used more deliberately and systematically to inform research. Such knowledge may be of different types, from distinct observations to more aggregated cultural ideas and understandings. However, in the same way as formal empirical material such as interview responses, researcher pre-understandings can be selectively remembered, and there is a risk that researchers confirm their own expectations, beliefs, or prejudices. Therefore, Alvesson and Sandberg (2022) stress the need to complement pre-understanding with existing formal data and to use theory systematically as a basis for challenging assumptions and conclusions.

In developing our case accounts, we strongly relied on our own research-based pre-understanding of how relational contracting has unfolded over time in our respective national contexts. In line with Alvesson and Sandberg (2022), we argue that our extensive experience as researchers in this field places us in a unique position to articulate, interpret and reflect on industry developments. The authors of this paper have all been involved in applied research projects on relational contracting in our respective countries, some of us over several decades. During this time, we have followed how relational contracting has been reflected in trade press and industry seminars, and we have observed how various champions, opponents and critical incidents have shaped the development. In some cases, our own research has influenced industry discourse and practice.

We have followed the recommendations of Alvesson and Sandberg (2022) and as far as possible verified our own pre-understanding by relevant secondary data such as research articles, reports, guidelines and other material. A template was developed to ensure that the texts covered the same aspects and time frame. Each of the case accounts comprised 10–15 pages. As an important part of our process, we have also reviewed each other's accounts and pinpointed needs for further clarification, elaboration or verification. This cross-reading has also inspired us to complement our own accounts in an iterative process.

Findings

In the following sections, we present condensed summaries of these texts for Denmark, Sweden, Finland and Norway. This order reflects the points in time when the earliest important developments in relational contracting occurred. In Table 1, the findings are further condensed, to highlight the most important developments taking place in each country during two periods: 2000–2010 and 2010–2023.

Denmark

In Denmark, relational contracting has developed in two waves. Early government-driven developments in project partnering in the 1990 and 2000s were followed by a legitimacy crisis and, nearly ten years later, by decentralized initiatives to establish long-term strategic

Table 1.
Overview of country summaries

	2000–2010	2010–2023
Denmark	Partnering mentioned in government policy addressing productivity in 2001. Joint industry guideline with standard contract issued in 2001. A government unit, Byggeriets Evalueringscenter (BEC) was established to evaluate suppliers' performance in projects and use for past performance evaluation. Legislation in 2003 prescribing to consider partnering for public projects and use the BEC system. Official government guideline issued in 2004. Three industry development programs with demonstration projects in 1999–2009 Partnering was inspired by UK and also promoted by the contractor NCC. It was widely spread, but increasingly questioned due to cost performance. After a few years, major cost overruns in the large partnering project DR Byen led to de-legitimization of the partnering concept	Sharp decline in use of partnering, expressed as "taboo". Legislation to consider partnering was abolished in 2013 Research initiatives in the mid-2000s had promoted long-term, multi-project relationships. In 2013, a research report with Swedish examples was used to build knowledge and legitimacy. In 2016, Copenhagen municipality introduced strategic partnerships based on framework contracts. The initiative was followed by research projects and connected to two different industry development programs. These programs developed a standard contract in 2017 and guidelines in 2021. The partnership model was successful and had up to 2021 been followed by around ten other municipal and regional clients A model "New partnering" for single projects was issued by a government client in 2017 and has been used for a few projects. No important examples of RC in infrastructure
Sweden	Building sector: Formal partnering (also called samverkan) used first time by individual clients in the 1990s. Promoted in 2003 by NCC based on Danish development. Endorsed by the Swedish Client's Forum which organized study visits and training, and developed model contract supplement. Widely spread in the building sector, mostly among public clients. No industry development programs Infrastructure: Collaborative government-industry initiative FIA in 2003, following conflicts and lawsuits. Based in non-contractual agreements In 2010, when the new Swedish Transport Administration (STA) was formed, FIA/Extended collaboration was replaced by a "pure client" policy advocating DB contracts	Building sector: Regular use of partnering/samverkan. Increase of strategic partnering. Large share of market (around 50% for some contractors), but still some failures and legitimacy problems Infrastructure: In 2013 contractors requested collaborative contracts and in 2015 STA introduced ECI. A few projects (ca 10) procured before 2018, but early conflicts in the first two caused STA to pause ECI. ECI had then gained poor reputation, and the new label TLS was used for ECI-type contracts. In 2022 contractors again request less risky contracts, and STA plans for a few "alliance-inspired" contracts, following contacts with Finland In parallel, use of ECI/partnering by other public infrastructure clients increases

(*continued*)

Table 1.

	2000–2010	2010–2023
Finland	First initiatives to introduce RC in the form of multiparty alliances inspired by AU taken in connection with research project in early 2000s, and subsequent VTT joint project with the industry, but did not gain momentum In 2006–2007, new research project and study visit to AU with infrastructure clients. In parallel, knowledge of IPD brought from the USA by individual practitioner, who founded the consultancy firm Vison and became a champion for alliances. Transfer of knowledge through involvement of Australian consultant, translation of guidelines and contractual frameworks. Seminars for industry Selection of first pilot project, call for tenders issued in 2010. Coaching by Vison to enable industry to submit tenders	Three consecutive pilot projects with transparent learning processes to develop and refine contractual and relational governance. Integration of lean principles to build legitimacy in industry. Independent consultants to audit costs Industry programs for clients to spread knowledge and share experiences. Separate programs for contractors. Committee to develop alliance contract 2015–2020. New public procurement legislation in 2017 emphasized lifecycle costs and competitive dialog. Government investigator recommended alliancing for demanding government projects No major failures, alliancing has favorable reputation. Rapid growth: 100 projects up to 2023 (10% of infrastructure sector). Alliances has spread to other sectors In parallel, various hybrid forms, called IPD (IPT in Finnish) are used. Here, performance varies more
Norway	In 1996–1999, the Norwegian Research Council initiated the program Collaboration in Construction ("Samspillet i byggeprosessen"), influenced by Danish improvement initiatives and business process engineering. In the following years, various forms of relational contracting ("samspillkontrakter") were applied by clients in the building sector. An early, successful collaborative flagship project was St. Olav's Hospital (2005–2013). However, there was no wide adoption In parallel, a government report in 1999 focused on cost overruns in large projects. As a result, a QA scheme and the associated research project Concept were established (both still running) At the industry level, a research programme was initiated to advance knowledge on project management, much based on experiences in the oil and gas sector. In 2001, the Norwegian Center for Project Management was established as an arena for research and learning	Around 2015, the Norwegian Center for Project Management was transformed to the center Project Norway, incorporating the collaborative research program BA2015, focusing on the construction sector. Many research projects include procurement aspects, but RC has not been a strong stream The interest in RC has increased in recent years, especially in the building sector. Several national and regional clients regularly use various forms of RC (samspill), including a few IPD projects. In 2017, a multiparty collaborative initiative was established by the contractor Veidekke for the development of a large residential project In the infrastructure sector, Nye Veier was established in 2016 to act as a lean and innovative client. Nye Veier has tested a variety of new models (BVP, IPD, CD, ECI), but not with strong focus on relational aspects. In 2019, Statens Vegvesen initiated a pilot project with two-phase relational contracts. Recently, Nye Veier has stopped using ECI since expectations were not met. Several attempts to develop standard contracts and models for RC projects, but little systematic evaluation and learning

Source(s): Authors' own creation

partnerships. However, no important developments in collaborative contracting have taken place in the infrastructure sector.

First wave: the rise and fall of project partnering. Relational contracting was introduced under the label of "partnering" and has primarily been used in the building sector. Partnering was mentioned for the first time in an official policy document in 1998 (By-og Boligministeriet, 1998), when the Ministry of Housing and Urban Affairs released the Construction Political Action Plan in which the interrelated issues of productivity and collaboration were highlighted as a central political focus area for the coming years. The Danish approach was heavily inspired by UK experiences with two-stage open book contracts between two parties. In 2001, a joint industry guideline containing a standard contract paradigm was released (Byggeri, 2001).

To support implementation of partnering, three development programs based in industry networks were initiated: (1) New forms of collaboration (Projekt Nye Samarbejdsformer) from 1999 to 2002, (2) Clients create values (Bygherrer skaber værdier) from 2002 to 2006; and (3) Partnering, learning, development and collaboration (PLUS netværket) from 2006 to 2009. Activities in the networks focused on testing and evaluating a range of measures through a series of demonstration projects. Despite that preliminary findings were inconclusive, partnering was pictured as a productivity-enhancing approach which would result in savings of 5–20% compared to traditional project delivery methods (Erhvervs-og Byggestyrelsen, 2002). In 2003, the Danish government released Statutory order #1135 on the use of public-private partnership (PPP), partnering and benchmarking, requiring all government sector clients to carry out systematic evaluations of their projects to determine if a partnering approach should be used. This was followed by the release of an official governmental guideline for partnering and when to use it in 2004 (later updated in Erhvervs-og Byggestyrelsen, 2006).

Throughout the 2000s, partnering gained increasing momentum in the building sector. The contractor company NCC spearheaded the development. In 2009, partnering accounted for 10–70% of the turnover at the five largest contracting companies. At the same time, however, a debate over the benefits and disadvantages of partnering took place, partly fueled by massive cost overruns (around 50%) in the project to build the new headquarters of the Danish Broadcasting Corporation (DR Byen). In 2008 the Auditor General's investigation concluded that partnering had directly contributed to 17% of the cost overrun. It was argued that the project was too complex to be completed under a partnering scheme and partnering was destabilized to such an extent that it acquired a taboo status. In 2013, the legislation was abolished. Today, partnering as a concept is not used much, but many elements and measures live on in other forms and under new labels.

Second wave: strategic partnerships. In the mid-2000s, a research project on strategic partnerships encompassing multiple projects was established in collaboration between the Technical University of Denmark (DTU) and the Danish Building Research Institute (SBi). To build knowledge and legitimacy for such methods, the foundation Realdania commissioned a report by the consultancy company Smith Innovation to analyze experiences from long term, multi-project relationships in Denmark and Sweden (Kadefors *et al.*, 2013). The negative experiences from project partnering were however still influential, and it was only in 2016 that the newly established central building client organization in Copenhagen Municipality, Byggeri København, could initiate the first strategic partnerships. There were two framework agreements, one larger (EUR 300M) on school refurbishments and one smaller (EUR 80M) on cultural, sports, social and healthcare facilities. Both had a time duration of four years. The tendering companies created a joint venture which then became the strategic partner to the building client. Directly inspired by the example of the Copenhagen Municipality, two social housing organizations established strategic partnerships in 2019, and by 2021, seven more partnerships had been launched, representing more than 3 bn Euro

of total value of completed and planned partnerships. Apart from the consultancy firm Smith Innovation, the two contractor firms NCC and Enemærke og Petersen have been important champions.

At the same time as the first strategic partnerships were started, the societal partnership Renovating Buildings Sustainably (REBUS) was formed by companies from the whole construction value chain. One goal was to create new forms of collaboration, and REBUS developed formalized and open tender documents to support building clients who want to enter into strategic partnerships. The Danish agreements for collaborative contracting are largely based on traditional contracts for framework agreements and Design-Build projects. As a part of REBUS, a standard contract for strategic partnerships was developed by the law firm DLA Piper based on the contractual setup from the municipality of Copenhagen and other industry experiences (REBUS, 2017). To further stimulate the adaptation of strategic partnerships, REBUS and another industry network, Værdibyg, published two guidelines focusing on different stages in the process (Værdibyg, 2021a, b).

Several research projects have been initiated, where especially DTU and SBi have been involved to evaluate the contracting practices. The model has been found to enable reductions in time, flexibility to handle unforeseen changes, reduction in the level of conflicts and an overall improvement in employee satisfaction. Lessons learned include the importance of a common model for cost calculation, shared balancing of the portfolio of projects, a functional information infrastructure and top management involvement from all parties.

Other developments. To address the needs for collaboration in single projects, several partly new models have emerged. The Danish Building and Property Agency launched the "New Partnering" concept in 2017. It is described as a form of collaboration with combining parts from the Finnish Alliance model, "traditional" partnering and other Danish models. Main elements are an economic model that separates construction costs from the supplier's profits, supplier selection based on behavioral assessment of key people and company culture and systematic efforts to enable cultural change and build a robust collaborative organization. So far, New Partnering has been successfully trialed on two university projects in 2017 and 2019. Another model is Co-creation with Design and Build. Also, Integrated Project Delivery (IPD) has been promoted, but there have been only a few IPD-inspired projects by the contractors MT Højgaard and Enemærke og Petersen.

Sweden

The Swedish political system places the main responsibility for operational level policies on the government agencies. Thus, despite similar criticism for low productivity as in other countries, there have been no explicit government policies relating to construction contracting. Instead, initiatives to introduce relational contracting have mainly come from individual clients and contractors. The development trajectories have, however, differed significantly between the building and infrastructure sectors.

Building sector overview. In the building sector, collaborative models began to emerge in the 1990s, inspired by the Japanese quality movement and developments in the UK. A pioneer client was the former County Council in Värmland with a 5-year refurbishment program for the Karlstad Central Hospital in strategic partnering already in the late 1990s, followed by several large collaborative projects. In 2002, a widely spread research report summarized research on partnering, international developments and Swedish experiences (Kadefors, 2002). In 2003, the Swedish contractor NCC started to market the partnering concept, influenced by their Danish subsidiary. Beginning in the early 2000s, the Swedish Construction Clients association organized seminars, study trips to the UK and courses for industry practitioners and facilitators. These activities were often held in collaboration with the small Swedish management consultant Fernia Consulting. The client association further

engaged lawyers to develop partnering guidelines and contract supplements, much based on input from NCC and still administers a practitioner network for relational contracting.

The use of relational contracting increased throughout the 2000s, although the dissemination varies between regions and clients. Most approaches have been based on a two-stage ECI model with open books, sometimes with a target cost and gainshare/painshare mechanism. An overarching agreement defines the terms of collaboration, but the usual standard contracts (either construct-only or Design Build) are used. Consultants and subcontractors are often involved, but contracts are generally not multiparty. Relational contracting is considered most useful in complex projects, such as hospital buildings, but is also frequently applied for residential buildings and various municipal buildings. The last 15 years, there has been an increase in so-called strategic partnering, where several consecutive projects are bundled into one contract.

Infrastructure overview. On the infrastructure side, the development in relational contracting took off in the early 2000s, when higher environmental requirements led to increased risks in underground projects. Following lawsuits in several large projects, contractors threatened to leave the Swedish market. The former Road and Rail administrations then initiated a change organization, Förnyelse i Anläggningsbranschen (FIA), or "Renewal in the civil engineering industry" (2003), also involving the main technical consultants and contractors. A guideline for collaboration was developed, under the label of "Increased collaboration" (Utökad samverkan), intentionally avoiding the concept of partnering. This model comprised some key partnering elements but procurement criteria and contracts in most cases remained traditional. Several large projects with a collaborative profile were planned and procured during this period (the Göta Tunnel in Göteborg, Norrortsleden and the Station City in the Stockholm City Line).

However, as the Swedish Transport Administration (STA) was established in 2010, by a merger between the road and rail administrations, focus shifted towards encouraging private sector innovation by using fixed price, Design-Build contracts. A "pure client" policy was installed, and in 2012, the FIA initiative was formally closed down. A few years later, however, the large contractors requested a low-risk, collaborative procurement model for large and complex projects. In 2015, the STA issued a new business strategy that included an option to use a two-stage ECI model. The first ECI contracts were two sub-projects in a large rail tunnel program, followed by another five projects in 2015–2018 (Rosander *et al.*, 2020; Rosander, 2022) and three maintenance contracts in 2020 (Kadefors *et al.*, 2023). Shortly after, problems and cost increases experienced in the planning stage of the first projects caused the STA to pause further use of ECI (Rosander and Kadefors, 2023). In parallel, however, several large DB contracts procured on lowest price ended up in lawsuits. By 2022, the contractors again stated that they would not bid on such high-risk contracts, which compelled the STA to start an initiative to become a more attractive client and reconsider relational contracting. Yet, despite that the still ongoing ECI projects by then had overcome the initial issues, the model had gained a poor reputation within STA and it was no longer considered possible to use this concept. Thus, the label Early Supplier Involvement (ESI) was coined for similar approaches and, in addition, it was decided to start a few pilot projects inspired by the Finnish Alliance model. In parallel, however, partnering/ECI models are increasingly common for municipal and regional infrastructure projects.

Legitimacy and learning. Sweden is the Nordic country where relational contracting has been most widespread over a longer period of time. Today, large contractors report that such contracts count for around half of their turnover. However, this development has not been straightforward and there are still significant legitimacy challenges. Despite the champion role of the client association, relational contracting has been seen to primarily benefit contractors, much because it has been promoted by NCC and Skanska. Further, the open book, cost-plus payment model has been challenged, especially how to handle the annual

rebates to contractors from material suppliers. Since several years, the Swedish Construction Clients association has been urged by some members to avoid specifically promoting relational contracting. Especially in Stockholm, the Construction Management (CM) consultants position themselves as an alternative to collaborative ECI contracts.

Another challenge has been perceived failures in projects. Performance in relational contracts still varies and even large and complex projects carried out by professional clients and big contractors experience cost increases and conflicts (Havenvid *et al.*, 2022; Rosander and Kadefors, 2023). The wide dissemination of relational contracting has come with a low entry threshold and substantial variations in preparation, ambitions and attitudes. Some clients have used collaborative contracts mainly because they received no bids for traditional contracts and there was no training before introducing ECI in the STA. Further, although Lean methods are used by some actors, they are not widely spread. A lack of joint industry platforms to support further professionalization in relational contracting has spurred active engagement by industry in developing the standard ISO 44001 Collaborative business relationship management (By-og Boligministeriet, 1998). However, the standard is perceived as complex and wider adoption has not taken off as of yet. The national research platform ProcSIBE (Procurement for Sustainable Innovation in the Built Environment, 2014–2021) produced a significant number of studies, but structures at the organizational and industry levels to systematically capture such research-based knowledge are weak (Rosander and Kadefors, 2023; Kadefors *et al.*, 2023).

Finland

General overview. In the 1990s, the Finnish industry was criticized for poor productivity and low innovation. This criticism was fueled by conflicts and economic inefficiencies in major projects using traditional contracts, causing a predecessor of the current Finnish Transport Infrastructure Agency (FTIA) to call for change in industry culture (Lahdenperä, 2019). In 2003, a project at VTT (Technical Research Centre of Finland) was started to investigate international experiences in collaborative contracting, especially multiparty alliances in Australia. These initiatives did however not gain momentum and a new research project was initiated, further advancing the concept of project alliancing (Pakkala *et al.*, 2007) and involving a study tour to Australia with representatives for the infrastructure authorities. This prompted joint industry-level development processes in which VTT was a key player. In parallel, an industry practitioner with experience in infrastructure construction visited research environments in California active in integrated project delivery (IPD) and lean construction. Back in Finland he focused on offering consulting services related to project alliances, which later led to the establishment of Vison Alliance Partners in 2012. The first alliance projects were initiated by the predecessor of FTIA in 2010, using Australian models with only minor adjustments.

The experiences from a pilot project for rail renovation and other early major project alliances, such as the landmark project Tampere Lakeshore tunnel (2011–2016), were positive. There have been no major failures, and the alliance model is today well known and has a positive reputation in the Finnish construction sector. Up to 2023, pure alliancing has been used in around 90 projects (finished and ongoing), including public infrastructure projects, other types of public building projects and a few private projects (Vison, 2023). Recently, alliancing has been used in other sectors as well (social, healthcare and public IT).

However, relational contracting more generally in Finland is referred to as IPD (IPT in Finnish). IPD in this broad sense covers both pure alliances and various hybrids, which apply additional "integration mechanisms" (collaboration agreement, big rooms, joint development, lean tools, etc.), but may be based on traditional contracts. Most often, CM approaches are

used ("collaborative Construction Management"). Around 30–50 such lighter IPD projects have been carried out, and the joint value of pure alliances and integrated project deliveries until 2023 was reported to be EUR 10 billion (Vison, 2023).

Relational contracting has been driven by the key public clients (particularly FTIA), large construction companies and consultancy firms. The consultancy firm Vison has been a central actor in developing practices for alliances and other IPDs and as coordinator of industry-level development programs. Research institutes and universities have also played key roles, especially VTT but also the Management of Multinational Investment Projects (MILL) research project at Oulu 2018–2020. Business Finland's funding for joint research projects with the industry and universities have been vital. The industry associations as well as Lean Construction Finland have all promoted the collaborative approaches.

Inspiration, knowledge development and legitimization. Pure alliancing represents a large step from the contracting methods traditionally used by public clients in Finland. Thus, the legitimization and discursive strategies by the key actors around project alliancing have emphasized the novelty and difference to established practices, e.g. "the model will shake and renew the field", and the first projects were purposefully reconstructed as something unique to reinforce the mobilization of the field actors toward alliancing.

In developing alliancing practices, inspiration has to a high extent been sought from other countries: particularly from Australia, but also from the UK and USA (the term IPD and lean construction methods). Key documents were brought from Australia and translated into Finnish. The first alliance guidelines and contracts were directly based on material provided by the Australian consultant involved in the background work for the first Finnish alliance project. A separate project was initiated in 2015 by industry representatives and the Building Information Foundation to develop new general contract conditions and numerous other model documents for project alliances. This work was eventually finalized in 2020 and established a national practice that involved some adjustments to the original Australian models.

Influences from the USA have also been important, and many industry practitioners have visited the lean community in California. However, the original IPD contracts have not been used; instead, lean methods have been combined with Australian alliance principles to form a specific Finnish alliance model. These lean elements have likely acted as a source of legitimacy for the alliance concept and facilitated its introduction, especially in the early stages. When the initial major project alliances were successful the method further gained in positive reputation, and a fashion perspective may partly explain the rapid growth in project alliancing. Another legitimizing factor has been new public procurement legislation (2017) that strongly enforces a focus on lifecycle costs and introduced competitive dialog as a routine procedure for more demanding projects. Further, the FTIA has prepared and published value-for-money reports showing positive results from their alliance projects. In 2017, a government-nominated investigator recommended that project alliance should be the primary option for demanding government construction projects.

Linkages between the early project alliance projects facilitated learning and fostered relationships between key practitioners. Knowledge transfer from one project to another also typically takes place during the tendering phase, when individuals share the learnings from prior projects in tendering workshops. Formalized industry-level activities and networks have also been highly influential in institutionalizing collaborative contracting. In such groups, participants share experiences and research results from project alliances, which has enabled continuous improvement and standardization of relational practices, as well as provided best-practice examples. Vison offers training and is running a network for owners in collaboration with RAKLI (the Finnish Association of Building Owners and Construction Clients). Professional associations have their own dedicated training programs. The large clients and contractors have systematically developed their own capabilities for engaging in

collaborative contracts by training and knowledge sharing between projects. However, while practices for the pure alliances are well defined, this applies less to the broader category of IPDs (IPTs, in Finnish), which causes frustration among industry practitioners.

Some criticism has pertained to practices for supplier selection. These include workshops to assess the collaborative capabilities of the tendering team. The practices are relatively similar between projects, since the same few consultants are active in most projects and documents from other projects can be utilized easily. Standards and model documents also exist nowadays. Thus, there has been concern that companies may learn "how to play the game" in the tendering workshops. In general, the activities in and laboriousness of the selection process have lightened a bit since the first projects, but many industry members still consider the process forbidding. In general, criticism towards collaborative contracting primarily stems from small companies who find it hard to compete.

Norway

Governance and management of large projects. The 1990s saw an increasing investment in transport infrastructure, where many road projects were pushed through by a strong transport minister before they were properly planned. The result was a wave of projects going over budget towards the end of the 1990s. In 1999, a government report, the Peder Berg report (Berg *et al.*, 1999) analyzed the performance of large investment projects across sectors. As a consequence, the Ministry of Finance established the Norwegian Quality Assurance (QA) Scheme in 2000 and the associated research program Concept in 2001. The first generation of the QA scheme was designed to ensure that projects do not go over budget, and the second generation (from 2005) also aims to ensure that the projects deliver value for money. In 2018 the QA scheme was transformed into the Norwegian State Project Model for large investment projects (Klakegg and Volden, 2017).

A parallel development to address the poor performance of projects took place at the industry level, but also inspired by experiences in the oil and gas sector. The research program PS 2000; Project Controls 2000) was initiated, followed by the establishment of the Norwegian Center for Project Management in 2001, intended as a permanent arena for research and exchange of experience on project management. In 2014 this arena was transformed into the center Project Norway, which also incorporated the collaborative research program BA2015, focusing on best practice in the construction sector. In 2021 Project Norway had 53 partners in industry and government and eight academic partners. This organization still drives development in the project management field and many of its research projects pick up elements of procurement research.

The quality assurance scheme and the related initiatives have led to a strong professionalization in project governance and management of large public projects in Norway, where procurement and contracting is one part. However, Norway has continuously seen higher costs in public construction projects than neighboring Nordic countries. Despite several government and industry initiatives and many new methods, the total cost level has not changed significantly.

Developments in construction procurement. Focusing specifically on improving the Norwegian construction industry, the Norwegian Research Council initiated the program Collaboration in Construction ("Samspillet i byggeprosessen") (1996–1999) involving partners from industry, research and public administration (Kommunal-og regionaldepartementet). The program was influenced by Danish improvement initiatives and principles of business process reengineering. One aim was to develop a model contract for collaborative projects. In the following years, various forms of relational contracting ("samspillkontrakter") have been applied by different clients. There are basic models where workshops, especially in the start-up phase, are combined with traditional contracts (Jernbaneverket/BA2015). However, it is

increasingly common to involve contractors early and use two-phase contracts with target costs and risk sharing.

In the building sector, relational contracting has been used for some larger hospital buildings. An early flagship project was St. Olavs Hospital (2005–2013) which introduced many collaborative elements and has been deemed successful. Today, Sykehusbygg and other clients in the health sector regularly use two-phase relational contracting models. The government client Statsbygg has applied relational contracting with earlier involvement of contractors and various forms of risk sharing in a limited number of projects (including Politiets Nasjonale Beredskapssenter and the life science building for the Oslo University, Livsvitenskapsbygget). Oslo Municipality is another important client. The regional authorities (fylker) have systematically used various forms of relational contracting (samspill) as their preferred model when developing new schools. In 2017, the multiparty collaborative single-purpose vehicle Team Veidekke (involving all key actors for the building project with shared ownership based on each party's resource allocation) was established for the development and construction of a residential project for the housing co-operative OBOS at Ulven. This has proven effective and was recently extended to a subsequent construction stage. The university in Trondheim has developed a highly ambitious research building through a collaborative development method, thoroughly documented through longitudinal research (Engebø *et al.*, 2020).

In infrastructure construction, the main public clients have until recently been conservative in their contracting methods. In 2016, however, the Norwegian Parliament established the limited company Nye Veier, owned by the Norwegian Ministry of Transport, to act as a lean and innovative construction client. Nye Veier has tested several contracting methods, including two-phase relational contracts with early contractor involvement. Another model, with inspiration from the Netherlands and the USA, has been Best Value Procurement, with strong focus on selecting suppliers on quality parameters. Following this development, Statens Vegvesen as well has started to use two-phase relational contracts with E16 Fagernes-Øylo as a pilot (2019). Most such projects use the NS8407 General conditions of contract for design-build contracts with tailor-made amendments. There have been several attempts by Standard Norway and industry organizations to develop standard contracts and models for this type of projects. However, none of them has reached enough support to become dominating. It is seen as a problem that practices still vary widely and that new models are being introduced without systematic evaluation and learning from experiences.

Recently, Integrated Project Delivery (IPD) models with multiparty involvement and lean elements have been used in one road project by Nye Veier (Kvål-Melhus) and one hospital project (the Tønsberg hospital in Vestfold). These projects used a translated version of the US AIA195-2008 Standard Form of Agreement for Integrated Project Delivery. Based on positive experiences in these projects, a third IPD project was initiated in 2022 as Sykehusbygg procured Senter for psykisk helse Øya (SPH) at St Olavs hospital.

Also related to the introduction of IPD are activities within Lean construction, which came to Norway in the early 2000s with the contractor Veidekke as a central actor (Lohne *et al.*, 2022). Over the years, there have been close contacts with the USA lean community, and today lean principles have spread to most large contractors, consultancies and client organizations in Norway.

Discussion

In this section, we describe and discuss differences between countries relating to processes of institutional change. The discussion is organized according to the themes identified in the theoretical overview: Triggers and problem perception, Agency and institutional

entrepreneurship, Building legitimacy for new contracting methods and dissemination and learning.

Triggers of de-institutionalization

In all Nordic countries, discussions around the viability of traditional contracting models intensified in the 1990s and early 2000s. In line with UK narratives (Sergeeva and Winch, 2020; Oti-Sarpong *et al.*, 2021), the industry discourses featured a general dissatisfaction with the outcomes of the existing institutional order in terms of costs, productivity, innovation and conflict levels. Such concerns have been important triggers of de-institutionalization and opened up for pluralism in contracting methods. The focus on relational contracting was especially strong in Denmark, although all countries showed interest in such methods to some extent. However, marketization trends in the public sector, expressed as outsourcing of client competencies and shifting of risk and responsibility to the private sector, have produced competing solutions to the perceived productivity problems. Thus, in Sweden a "pure client" policy in the STA prescribed an arm's length approach and Design-Build contracts (Rosander and Kadefors, 2023). In the Danish context, the marketization trend has resulted in the retraction of government influence in the development of relational contracting (Gottlieb and Frederiksen, 2019). In Finland, however, relational contracting was seen to require strong owner capabilities, thereby reversing a previous inclination towards marketization.

Traditional contracting methods have also been challenged by power relationships in the construction market. In general, collaborative methods tend to be more used when demand is high and the market favors contractors (Mosey, 2019). Especially Swedish contractors have repeatedly threatened to leave the market when they have experienced losses in infrastructure projects, and the STA has responded by opening up for a limited use of relational contracting. In the building sector, it is not unusual that clients use relational contracting mainly to receive more bids. In Australia as well, contractors were important drivers of alliances (Gerber and Misko, 2019).

Further, developments in technology and new requirements may change contracting preferences. Thus, traditional methods are less useful in urban sites with difficult ground conditions and a multiplicity of stakeholders. Higher environmental requirements have induced relational contracting in Swedish construction, indicating that also sustainability can be a driver. Further, in line with Whyte (2019), technical developments in information and communication technology (ICT) have been influential. There has been active exchange between Lean/Virtual Design and Construction (VDC) proponents based in the Californian and Nordic construction industries, and these contacts directly inspired and legitimized the use of alliances in Finland as well as a small number of flagship IPD projects in Norway.

Altogether, a variety of factors may affect preferences for contracting practices. However, de-institutionalization in this field does not imply that traditional methods are replaced by relational contracting, but rather that relational contracting is introduced as a new component in the toolbox for construction contracting. Thus, the change is more the process of adding a new institutional logic than replacing an outdated institutional practice with a newer one, meaning that organizations need to cope with institutional complexity and co-existing institutional logics (Greenwood *et al.*, 2011; Matinheikki *et al.*, 2019).

Agency and institutional entrepreneurship

So, what actors have been important in driving developments in relational contracting in the Nordic countries? Considering that a large part of construction procurement is carried out by public clients, it seems reasonable that governments intervene to shape contracting practices in this field (Sergeeva and Winch, 2020). However, the Nordic governments have taken quite different roles in this respect. The Danish government has been the most active, introducing

legislation prescribing to consider partnering in 2003, combined with a range of other policy components. In Norway, a government-initiated renewal program in the late 1990s focused specifically on collaboration, but several later initiatives have targeted governance and management of projects in general. The Norwegian government further established the company Nye Veier to challenge the Road Administration.

When it comes to organizational actors, however, public clients at both government and local levels have been central in driving the development and diffusion of relational contracting practices in all countries. In Sweden, relational contracting has primarily been used by regional and municipal clients, although the STA has taken some initiatives. In Finland, the FTIA and its predecessors acted as a lead client, and a wide range of public clients have been involved in the alliancing learning programs. In Denmark, important regional and municipal clients acted as champions during the second partnering wave, focusing on strategic partnerships. In Norway, both Nye Veier and a range of public clients in the building sector have applied two-party, ECI contracts, and a few of them have also pioneered multiparty models (IPD). The clients' associations played important roles especially in Denmark, Sweden and Finland.

Furthermore, individual employees of governments, suppliers and industry associations have acted as champions. In several cases, small consultancy firms played key roles as knowledge providers and institutional entrepreneurs (Suchman, 1995; Battilana *et al.*, 2009). In Finland and Denmark, such firms have strategically used the founders' strong networks in industry and academia to gain influence at the institutional level in relatively small markets.

At the supplier side, the contractor company NCC has strongly promoted partnering in both Denmark and Sweden. In Denmark, also Enemærke og Petersen supported strategic partnering. Skanska, with its UK subsidiary, championed ECI, but also strategic partnering. The contractor company Veidekke led the development of Lean and VDC in both Sweden and Norway. However, the Swedish example suggests that it can be hard for contractor companies to achieve legitimacy as institutional entrepreneurs in the same way as public clients and individual champions, since they are more likely to be perceived as driven by self-interest (cf. David *et al.*, 2013). Instead, as mentioned above, contractors seem to gain influence primarily by their market power.

Finally, academia has often played a key role in developing new contracting practices. Universities and institutes are frequently involved in industry development programs to follow up projects and provide knowledge and legitimacy. In all countries except Sweden, general industry development programs have recently (in the last decade) addressed issues of construction procurement, including relational pilot projects and follow-up research projects. Such programs provide additional resources for learning and form ecosystems that are more capable of absorbing research-based knowledge than a wide range of disconnected actors.

Building legitimacy for new contracting methods

As indicated by the discussion above, legitimacy is clearly a key issue in implementing new contracting methods. The country summaries describe various strategies to gain broader support for relational contracting. In particular, several countries have witnessed significant and sudden shifts in legitimacy, much in line with how the support for alliancing has varied in Australia (Gerber and Misko, 2019) and UK defense procurement (Winch and Maytorena-Sanchez, 2020). In this section, we compare and discuss trajectories for introducing and implementing relational contracting from a legitimacy perspective.

In all countries, experiences in other countries have been used to build legitimacy – both to point at industry problems (theorizing/specification) and to position collaborative approaches as solutions to these problems (theorizing/justification). The earlier developments in Denmark and Sweden referred primarily to models and government strategies for

construction improvement used in the UK, while in Finland it has been Australia and the USA. In Norway, most developments have taken off later, and here the USA and the Netherlands seem to have been most important. There has also been imitation between the Nordic countries, where Sweden, and to some extent also Norway, were influenced by the first wave of project partnering in Denmark in the 2000s, and Denmark later used experiences from Sweden to legitimize and inspire their second wave of strategic partnerships. Today, the STA looks to Finland for inspiration on alliances, and industry networks suggest that Sweden should copy the Norwegian initiative to establish the competing infrastructure client Nye Veier. Another source of legitimacy, most explicitly used in Finland, has been to integrate relational contracting with engineering-oriented lean methods. Furthermore, it has been important to involve actors with high legitimacy, such as large public clients, respected consultants and academia.

However, in several countries the legitimacy that was built in introductory (theorizing) stages has been challenged later in the implementation process. The most salient example was when the Danish government introduced its partnering initiative in the late 2000s and the model was effectively de-legitimized after only a few years, establishing a taboo which is still influential. The weak industry support for the new partnering model has been interpreted as a reaction to the coercion associated with legislation, where actors conformed and paid lip service to the policy without true buy-in (cf. Meyer and Rowan, 1977). Further, in making the case for partnering the Danish government had mirrored the UK prospects for substantial cost reductions and when projects failed to deliver on such high goals pragmatic legitimacy (Suchman, 1995; Deephouse *et al.*, 2017) eroded. This development supports previous findings that strong top-down pressure is not a quick fix to bring about change in the construction industry (cf. Oti-Sarpong *et al.*, 2021).

This said, the Swedish example shows that legitimacy challenges may occur also in more bottom-up trajectories. Partnering was introduced in Swedish building construction in the early 2000s by the client association as well as by individual clients and contractors and quickly gained wide adoption. Since then, the application of relational contracting has grown. However, despite a high market share at a national level for more than a decade, the outcomes, performance and legitimacy of relational contracting continue to fluctuate over time and between sub-markets. Many clients take on relational contracting because they want to try a new concept that is in fashion, or in response to request from contractors, but without sufficient preparation and respect for the complexities involved. Thus, competencies and practices still vary widely, causing problems especially in complex projects where more sophisticated approaches are necessary. In the infrastructure sector, initial problems in a few ECI contracts led the STA to promptly return to conventional Design-Build and Design-Bid-Build contracts. In Norway as well, there has been a recent backlash when Nye Vejer implemented ECI and did not achieve the expected benefits.

These pendulum movements, where opponents swiftly use initial problems to discredit new collaborative models, suggest that there is an underlying skepticism towards relational contracting in the sector. Such attitudes likely relate to both self-interest of individuals, who have invested in developing their skills to master traditional contract management (Crespin-Mazet and Portier, 2010) and to normative marketization discourses at the societal and organizational levels (Rosander and Kadefors, 2023). Since the tolerance for failure is low, early applications of relational contracting must be successful to establish more stable pragmatic legitimacy. Especially large and visible flagship projects cannot be allowed to fail or underperform. This is confirmed by the stability in the legitimacy of alliancing in Finland, where the development has been more systematic and knowledge-based, and there have been no failures.

Further, the findings point at the role of language in this highly contested field. For some Swedish clients it has been important not to use the label partnering, but rather

"samverkanskontrakt", which also seems to be common in Norway. Moreover, we have seen that losses in legitimacy lead to a proliferation of models and labels. Hence, the concept of strategic partnerships was selected for the second wave of relational contracting in Denmark, as the term partnering had lost its legitimacy. Renewed calls for relational contracting in single projects resulted in a model called New Partnering, to contrast with previous approaches. When the ECI concept lost in legitimacy in the STA, the labels ESI and "alliance-inspired" were introduced for similar approaches. However, while new labels may be useful to regain legitimacy, they hamper learning over time and between countries.

Dissemination and learning

Clearly, strategies and activities at the industry level for building and disseminating knowledge are essential. In Finland, knowledge of alliancing and IPD was secured by study visits to Australia and California and by involving an Australian alliance consultant. Guidelines and agreements were directly translated, and there was controlled testing and learning in carefully planned pilot projects before wider implementation. Training was provided to all industry actors, and consultancy companies supported projects based on a common body of knowledge. Involvement of research has also been substantial. A similar approach can be seen in Denmark today, where the introduction of strategic partnerships has been more incremental and bottom-up than the previous legislation-based initiative. As in Finland, the model was tested by committed clients and evaluated before being spread to a limited number of followers, which were associated to industry renewal networks and research projects. However, the earlier Danish partnering initiative also included development of guidelines and research programs, indicating that the key to success is the stepwise approach, focusing more on avoiding failures than on quick dissemination. Another learning for policymakers is that envisaging high benefits to justify a new practice in early theorizing stages may backfire in later stages, when these expectations have to be met.

These observations however also highlight that it is difficult to combine wide adoption and stable legitimacy for relational contracting. In the project-based, decentralized construction sector, each project manager may design his or her personal model within certain limits. The Swedish development seems to confirm the observations of Ansari *et al.* (2010) and Greenwood *et al.* (2002) that practices that are open for multiple interpretations, require low investments and are easy to understand are more likely to be adopted. However, while simple models of relational contracting may work in smaller projects and markets, more advanced approaches are needed for complex projects that involve actors with no previous relationships. In effect, there are two parallel trajectories in Finland, where the alliance model represents a sophisticated approach which is well defined and combined with extensive training and other support structures, ensuring fidelity with the source model. The other trajectory more resembles the Swedish example: a variety of relational contracting methods are used by various clients under the umbrella concept of IPD/IPT, and in this sector, performance varies more. In the UK as well, there is openness in how to translate high level ambitions to operational practice, with similar effects (Bresnen and Lennie, 2023). Thus, a key challenge is to implement relational contracting broadly without diluting the concept so much that it fails to deliver.

Industry networks and collective actors, such as industry development initiatives, local arenas and professional associations, may potentially contribute to spreading relational contracting approaches and consolidate legitimacy toward multiple audiences. Still, centrally conceived models supported by handbooks and training may fail to engage local actors. In Norway, where there have been many industry development programs, intermediate actors and networks were found to produce their own tools and models, thereby complicating

sustainable industry-level learning. In several countries, however, relational contracting is already associated with the international Lean Construction body of knowledge and community. Such connections might be strengthened and reach beyond the USA concept of IPD to also include variants of relational contracting suitable for simpler projects. Another resource is the ISO standard 44001 for collaborative business relationship management, where structures are defined both for the operational level and for long-term organizational learning. Although there are challenges associated with conveying cognitive legitimacy (Suchman, 1995; Deephouse *et al.*, 2017) since the standard is quite complex, there is a common terminology and structure which may help to go from common-sense and piecemeal interpretations to more holistic and systematic approaches.

Conclusions

Thirty years after the Latham (1994) report, relational contracting can no longer be considered a novel practice. However, structures for long-term learning in this field still seem to be weak. In this paper, we have mapped and compared the longitudinal developments in relational contracting over 25 years in four Nordic countries, with a focus on patterns of wider dissemination and learning. Based on theories of institutional change, an important focus of the paper has been to understand why implementation of relational contracting tends to follow a pendulum movement of legitimacy building, dissemination and backlash. Our comparative analysis highlights several contributions to research and practice.

First, legitimacy of relational contracting is fragile, and backlashes are typically caused by failures to meet expectations for cost reductions, innovation and reduction of conflicts. Thus, it is essential to ensure that practitioners possess the relevant competencies, so that failures can be avoided especially in large and visible projects. The higher the complexity, the more essential are strong structures at the industry level to produce shared knowledge to guide operations. Moreover, we see that when relational contracting is pushed back due to legitimacy failures, similar ideas tend to arise again under new labels and in slightly new forms, often by looking to other countries for successful examples. The result is a proliferation of concepts and practices that presents further obstacles to learning. Thus, a high contextual knowledge is needed to interpret and successfully learn from experiences in other countries. Furthermore, it is important that policymakers consider not only contract models in seeking inspiration from other countries, but also strategies to manage industry-level learning.

Second, there is a contradiction between dissemination and performance. We have seen that structured learning may work in closely knit industry contexts, but combining high sophistication with wide adoption remains a challenge. Although not all projects require advanced approaches, the level of shared understanding has to be high enough to enable the contracting parties to adequately assess collaboration needs and competences. One difficulty, then, is how to engage broader collectives of practitioners in decentralized initiatives, while still connecting these to an industry-level learning process. Here, resources at higher institutional levels, such as international standards, may be useful to align practices across fragmented industry landscapes.

Third, there is a perpetual tension between high-involvement collaboration and influential marketization trends that prescribe arms-length contracts that assign high freedom and risks to contractors. This underlying conflict is one reason why relational contracting is vulnerable. However, both collaborative and outcome-based approaches should be part of a contracting toolbox that most large clients and contractors need to master. Thus, proponents of both stances should perceive the process of implementing relational contracting as one of increasing institutional complexity, where both logics co-exist, rather than as a competition between two mutually exclusive logics.

This paper contributes to the small stream of literature on long-term institutional change in the construction sector. The Nordic perspective further complements the more studied Anglo-Saxon contexts to give a broader international perspective on a widespread but still intriguing phenomenon. The results should be useful for practitioners and policymakers in any country aiming to introduce new contracting practices in the construction sector.

References

Aaltonen, K. and Turkulainen, V. (2022), "Institutionalization of a collaborative governance model to deliver large, interorganizational projects", *International Journal of Operations and Production Management*, Vol. 42 No. 8, pp. 124-1328, doi: 10.1108/ijopm-11-2021-0741.

Abrahamson, E. (1991), "Managerial fads and fashion: the diffusion and rejection of innovation", *Academy of Management Review*, Vol. 16 No. 3, pp. 586-612, doi: 10.2307/258919.

Alvesson, M. and Sandberg, J. (2022), "Pre-understanding: an interpretation-enhancer and horizon-expander in research", *Organization Studies*, Vol. 43 No. 3, pp. 395-412, doi: 10.1177/0170840621994507.

Ansari, S.M., Fiss, P.C. and Zajac, E.J. (2010), "Made to fit; how practices vary as they diffuse", *Academy of Management Review*, Vol. 35 No. 1, pp. 67-92, doi: 10.5465/amr.35.1.zok67.

Battilana, J., Leca, B. and Boxenbaum, E. (2009), "How actors change institutions: towards a theory of institutional entrepreneurship", *Academy of Management Annals*, Vol. 3 No. 1, pp. 65-107, doi: 10.5465/19416520903053598.

Bechky, B.A. (2006), "Gaffers, gofers, and grips: role-based coordination in temporary organizations", *Organization Science*, Vol. 17 No. 1, pp. 3-21, doi: 10.1287/orsc.1050.0149.

Berg, P., Andersen, K., Østby, L.-E., Lilleby, S., Stryvold, S., Holand, K., Korsnes, U., Rønning, K., Johansen, F. and Kvarsvik, T. (1999), *Styring av statlige investeringer [Management of State Investments]*, Ministry of Finance [Finansdepartementet], Government of Norway, Oslo.

Berg, J.B., Thuesen, C. and Jensen, P.A. (2022), "Procurement innovation as a vehicle for sustainable change – a case study of the Danish model of strategic partnerships", *Construction Innovation*, Vol. 23 No. 3, pp. 665-682, doi: 10.1108/CI-04-2021-0067.

Bresnen, M. and Lennie, S.J. (2023), "Driving program delivery forward? A case study of owner–supplier collaboration in infrastructure development", *IEEE Transactions on Engineering Management*, pp. 1-13, doi: 10.1109/tem.2023.3282743.

Bresnen, M. and Marshall, N. (2000), "Partnering in construction: a critical review of issues, problems and dilemmas", *Construction Management and Economics*, Vol. 18 No. 2, pp. 229-237, doi: 10.1080/014461900370852.

Byggeri, Dansk (2001), "Partnering i praksis (Partnering in Practice)", *Dansk Byggeri*, København.

By-og Boligministeriet (1998), *Byggepolitisk Handlingsplan 98' (Construction Political Action Plan 98')*, by- Og Boligministeriet, København.

Qiu, T. and Chen, H. (2022), "A Systematic review of the knowledge domain of institutional theory in construction project management", *Engineering Construction and Architectural Management*, Vol. 30 No. 6, pp. 0969-9988, doi: 10.1108/ECAM-08-2021-0754.

Crespin-Mazet, F. and Portier, P. (2010), "The reluctance of construction purchasers towards project partnering", *Journal of Purchasing and Supply Management*, Vol. 16 No. 4, pp. 230-238, doi: 10.1016/j.pursup.2010.06.001.

David, R.J., Sine, W.D. and Haveman, H.A. (2013), "Seizing opportunity in emerging fields: How institutional entrepreneurs legitimated the professional form of management consulting", *Organization Science*, Vol. 24 No. 2, pp. 356-377, doi: 10.1287/orsc.1120.0745.

Davies, A., Macaulay, S.C. and Brady, T. (2019), "Delivery model innovation: insights from infrastructure projects", *Project Management Journal*, Vol. 50 No. 2, pp. 119-127, doi: 10.1177/8756972819831145.

Deephouse, D.L., Bundy, J., Tost, L.P. and Suchman, M.C. (2017), "Organizational legitimacy: six key questions", in Greenwood, R., Oliver, C., Lawrence, T.B. and Meyer, R.E. (Eds), *The SAGE Handbook of Organizational Institutionalism*, 2nd ed., SAGE, Thousand Oaks, pp. 27-54.

DiMaggio, P.J. and Powell, W.W. (1983), "The iron cage revisited: institutional isomorphism and collective rationality in organizational fields", *American Sociological Review*, Vol. 48 No. 2, pp. 147-160, doi: 10.2307/2095101.

Engebø, A., Lædre, O., Young, B., Larssen, P.F., Lohne, J. and Klakegg, O.J. (2020), "Collaborative project delivery methods: a scoping review", *Journal of Civil Engineering and Management*, Vol. 26 No. 3, pp. 278-303, doi: 10.3846/jcem.2020.12186.

Erhvervs-og Byggestyrelsen (2002), *Projekt Nye Samarbejdsformer, Slutrapport. Initiativ 6 i Byggepolitisk Handlingsplan 98' (Project New Forms of Collaboration. Final Report. Initiative 6 in the Construction Political Action Plan 98')*, Erhvervs- Og Byggestyrelsen, København.

Erhvervs- og Byggestyrelsen (2006), *Vejledning i partnering – med særligt henblik på offentlige og offentligt støttede bygherrer*, 2nd ed., Copenhagen, Denmark.

Eriksson, P.E. (2010), "Partnering: what is it, when should it be used, and how should it be implemented?", *Construction Management and Economics*, Vol. 28 No. 9, pp. 905-917, doi: 10.1080/01446190903536422.

Farshid, R., Malik, M.A.K. and Tayyab, M. (2018), "A comparative study of early contractor involvement and project alliancing", *International Journal of Project Organization and Management*, Vol. 10 No. 2, pp. 93-108, doi: 10.1504/ijpom.2018.10013280.

George, A.L. and Bennett, A. (2005), *Case Studies and Theory Development in the Social Sciences*, MIT Press, Cambridge, Mass.

Gerber, P. and Misko, M. (2019), "How does collaborative procurement operate in Australia", in Mosey, D. (Ed.), *Collaborative Construction Procurement and Improved Value*, Wiley, pp. 391-402.

Gottlieb, Stefan Christoffer and Frederiksen, Nicolaj (2019), "Deregulation as socio-spatial transformation: Dimensions and consequences of shifting governmentalities in the Danish construction industry", *Environment and Planning C: Politics and Space*, Vol. 38 No. 3, pp. 484-502.

Gottlieb, S.C., Frederiksen, N., Koch, C. and Thuesen, C. (2020), "Hybrid organisations as trading zones: responses to institutional complexity in the shaping of strategic partnerships", *Construction Management and Economics*, Vol. 38 No. 7, pp. 603-622, doi: 10.1080/01446193.2020.1738514.

Greenwood, R., Suddaby, R. and Hinings, C.R. (2002), "Theorizing change: the role of professional associations in the transformation of institutional fields", *Academy of Management Journal*, Vol. 45 No. 1, pp. 58-80, doi: 10.5465/3069285.

Greenwood, R., Raynard, M., Kodeih, F., Micelotta, E.R. and Lounsbury, M. (2011), "Institutional complexity and organizational responses", *Academy of Management Annals*, Vol. 5 No. 1, pp. 317-371, doi: 10.5465/19416520.2011.590299.

Hall, D.M. and Scott, R.W. (2019), "Early stages of the institutionalization of integrated project delivery", *Project Management Journal*, Vol. 50 No. 2, pp. 128-143, doi: 10.1177/8756972818819915.

Havenvid, M.I., Linné, Å., Sundquist, V. and Wagrell, S. (2022), "*Kunskapsintegration i sjukhusprojekt*. SBUF and CMB", available at: https://vpp.sbuf.se/Public/Documents/ProjectDocuments/10f0026a-1438-4a2c-9814-f71520c51ee8/FinalReport/SBUF%2013781%20Slutrapport%20Kunskapsintegration%20i%20sjukhusprojekt.pdf

HM Government (2013), "Construction 2025. Industrial strategy: government and industry in partnership", available at: https://assets.publishing.service.gov.uk/media/5a7b7ea140f0b62826a03f2c/bis-13-955-construction-2025-industrial-strategy.pdf

Hosseini, A., Wondimu, P., Klakegg, O.J., Andersen, B. and Lædre, O. (2018), "Project partnering in the construction industry: theory vs Practice", *The Engineering Project Organization Journal*, Vol. 8 No. 1, doi: 10.25219/epoj.2018.00101.

Huybrechts, B. and Haugh, H. (2018), "The roles of networks in institutionalizing new hybrid organizational forms: insights from the European renewable energy cooperative network", *Organization Studies*, Vol. 39 No. 8, pp. 1085-1108, doi: 10.1177/0170840617717097.

Kadefors, A. (1995), "Institutions in building projects: implications for flexibility and change", *Scandinavian Journal of Management*, Vol. 11 No. 4, pp. 395-408, doi: 10.1016/0956-5221(95)00017-p.

Kadefors, A. (2002), *Förtroende och samverkan. Förutsättningar och erfarenheter*, Chalmers University of Technology, Göteborg.

Kadefors, A., Thomassen, M. and Jørgensen, M.N. (2013), *Long term strategic collaboration in the construction industry*, Realdania. Copenhagen.

Kadefors, A., Lingegård, S., Uppenberg, S., Alkan-Olsson, J. and Balian, D. (2021), "Designing and implementing procurement requirements for carbon reduction in infrastructure construction–international overview and experiences", *Journal of Environmental Planning and Management*, Vol. 64 No. 4, pp. 611-634, doi: 10.1080/09640568.2020.1778453.

Kadefors, A., Hedborg, S., Nilsson-Vestola, E. and Eriksson, P.E. (2023), *Samverkan Hög inom väg- och Järnvägsunderhåll: uppföljning av tidiga skeden i tre pilotkontrakt*, KTH, Stockholm.

Klakegg, O.J. and Volden, G. (2017), "Governance in public projects: the Norwegian case", in Müller, R. (Ed.), *Governance and Governability for Projects. Enablers, Practices and Consequences. Routledge Studies in Corporate Governance*, Routledge, pp. 129-156, 2017.

Lahdenperä, P. (2012), "Making sense of the multi-party contractual arrangements of project partnering, project alliancing and integrated project delivery", *Construction Management and Economics*, Vol. 30 No. 1, pp. 57-79, doi: 10.1080/01446193.2011.648947.

Lahdenperä, P. (2019),"A longitudinal view of adopting project alliancing: case Finland", in Lill, I. and Witt, E. (Eds), *10th Nordic Conference on Construction Economics and Organization (Emerald Reach Proceedings Series)*, Vol. 2, Emerald Publishing, pp. 129-136.

Latham, M. (1994), *Constructing the Team – Final Report*, Department of Environment, Transport & the Regions, London.

Lawrence, T.B. and Suddaby, R. (2006), "Institutions and Institutional Work", in Clegg, S.R., Hardy, C., Nord, W.R and Lawrence, T.B. (Eds), *The Sage Handbook of Organization Studies*, Sage, London, pp. 215-254.

Lohne, J., Torp, O., Andersen, B., Aslesen, S., Bygballe, L., Bølviken, T., Drevland, F., Engebø, A., Fosse, R., Holm, H.T., Hunn, L.K., Kalsaas, B.T., Klakegg, O.J., Knotten, V., Kristensen, K.H., Olsson, N.O.E., Rolstadås, A., Skaar, J., Svalestuen, F., Vaagen, H., Wondimu, P. and Laedre, O. (2022), "The emergence of lean construction in the Norwegian AEC industry", *Construction Management and Economics*, Vol. 40 Nos 7-8, pp. 585-597, doi: 10.1080/01446193.2021.1975041.

Matinheikki, J., Aaltonen, K. and Walker, D. (2019), "Politics, public servants, and profits: institutional complexity and temporary hybridization in a public infrastructure alliance project", *International Journal of Project Management*, Vol. 37 No. 2, pp. 298-317, doi: 10.1016/j.ijproman.2018.07.004.

Meyer, J.W. and Rowan, B. (1977), "Institutionalized organizations: formal structure as myth and ceremony", *American Journal of Sociology*, Vol. 83 No. 2, pp. 340-363, doi: 10.1086/226550.

Micelotta, E., Lounsbury, M. and Greenwood, R. (2017), "Pathways of institutional change: an integrative review and research agenda", *Journal of Management*, Vol. 43 No. 6, pp. 1885-1910, doi: 10.1177/0149206317699522.

Mollaoglu, S., Sparkling, A. and Thomas, S. (2015), "An inquiry to move an underutilized best practice forward: barriers to partnering in the architecture, engineering, and construction industry", *Project Management Journal*, Vol. 46 No. 1, pp. 69-83, doi: 10.1002/pmj.21469.

Mosey, D. (2019), *Collaborative Construction Procurement and Improved Value*, Wiley-Blackwell, Hoboken, NJ, USA.

Oti-Sarpong, K., Pärn, E.A., Burgess, G. and Mohamed, Z. (2021), "Transforming the construction sector: an institutional complexity perspective", *Construction Innovation*, Vol. 22 No. 2, pp. 361-387, doi: 10.1108/CI-04-2021-0071.

Pakkala, P., de Jong, W. and Äijö, J. (2007), *International Overview of Innovative Contracting Practices for Roads*, Finnish Road Administration, Helsinki.

Powell, W.W. (1991), "Expanding the scope of institutional analysis", in Powell, W.W. and DiMaggio, P.J. (Eds), *The New Institutionalism in Organizational Analysis*, University Of Chicago Press, Chicago.

REBUS (2017), "Udbudskoncept for strategiske partnerskaber", *Samfundspartnerskabet REBUS – Renovating Buildings Sustainably*, available at: https://rebus.nu/viden-og-vaerktoejer/udbudskoncept/ (accessed 24 April 2024).

Rosander, L. (2022), "Same same but different: Dynamics of a pre-procurement routine and its influence on relational contracting models", *Construction management and economics*, Vol. 40 No. 11-12, pp. 955-972, doi: 10.1080/01446193.2022.2108093.

Rosander, L. and Kadefors, A. (2023), "Implementing relational contracting in a public client organization: the influence of policy clashes, resources and project autonomy", *Construction Management and Economics*, Vol. 41 No. 8, pp. 1-19, doi: 10.1080/01446193.2023.2190992.

Rosander, L., Kadefors, A. and Eriksson, P.E. (2020), *Implementering av samverkansentreprenader med tidig entreprenörsmedverkan i Trafikverket: Erfarenheter från sju projekt*, KTH, Stockholm.

Schwarz, G. and Stensaker, I. (2014), "Time to take off the theoretical straightjacket and (re-) introduce phenomenon-driven research", *The Journal of Applied Behavioral Science*, Vol. 50 No. 4, pp. 478-501, doi: 10.1177/0021886314549919.

Scott, W.R. (2008), *Institutions and Organizations: Ideas and Interests*, SAGE Publications, Thousand Oaks, CA.

Sergeeva, N. and Winch, G.M. (2020), "Narrative interactions: how project-based firms respond to government narratives of innovation", *International Journal of Project Management*, Vol. 38 No. 6, pp. 379-387, doi: 10.1016/j.ijproman.2020.08.005.

Suchman, M.C. (1995), "Managing legitimacy: strategic and institutional approaches", *Academy of Management Review*, Vol. 20 No. 3, pp. 571-610, doi: 10.2307/258788.

Værdibyg (2021a), "Strategic partnerships – from idea to contract", available at: https://vaerdibyg.dk/vejledning/establishing-collaboration-2-2/

Værdibyg (2021b), "Strategic partnerships – implementation of the collaboration", available at: https://vaerdibyg.dk/vejledning/establishing-collaboration-2/

Vison (2023), "IPD models open the door to lean construction", Vison Alliance report 2023, available at: www.vison.fi

Von Krogh, G., Rossi-Lamastra, C. and Haefliger, S. (2012), "Phenomenon-based research in management and organisation science: When is it rigorous and does it matter?", *Long range planning*, Vol. 45 No. 4, pp. 277-298, doi: 10.1016/j.lrp.2012.05.001.

Walker, D.H.T. and Lloyd-Walker, B.M. (2015), *Collaborative Project Procurement Arrangements*, Project Management Institute, Newtown Square, PA.

Whyte, J. (2019), "How digital information transforms project delivery models", *Project Management Journal*, Vol. 50 No. 2, pp. 177-194, doi: 10.1177/8756972818823304.

Winch, G.M. and Maytorena-Sanchez, E. (2020), "Institutional projects and contradictory logics: responding to complexity in institutional field change", *International Journal of Project Management*, Vol. 38 No. 6, pp. 368-378, doi: 10.1016/j.ijproman.2020.08.004.

Wondimu, P., Klakegg, O.J. and Laedre, O. (2020), "Early contractor involvement (ECI): ways to do it in public projects", *Journal of Public Procurement*, ISSN: 1535-0118.

Corresponding author
Anna Kadefors can be contacted at: kadefors@kth.se