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## How relational contract theory influence management strategies and project outcomes: a systematic literature review

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### ABSTRACT

Despite growing interest in Relational Contracting (RC), few studies have comprehensively investigated the qualities required for a successful RC project. Macneil's ten norms are principles of behaviour in contracts based on the application of relational contract theory and play an essential role in the formation and agreement of parties and their commitment to means and objectives. In contributing a missing dimension to the RC approach in construction, the purpose of this research is to conduct a systematic review of studies of relational contracting to answer the question: In what ways can the influence of RC theory be observed in the management strategies and outcomes of relational projects? Macneil's norms are used to provide a link between strategies and outcomes as a way of understanding RC and its influence on collaboration between the project actors in determining project outcomes. The results provide new insights with a view of consolidating extant literature and contributing through mapping practice back to theory. Findings show that the norms are evident in projects but with varied application and realisation in practice. This paper offers managerial implications and future research directions to investigate and capture the part played by the norms as mechanisms in construction projects.

### ARTICLE HISTORY

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Governance; macneil's norms; project management; relational contracting; systematic review

### Introduction



The construction sector represents a vital element in society by meeting the demands of building and infrastructural needs essential for the sustainable development of society (Johnsson *et al.* 2020). Considering the complex goals of sustainable development (Jobidon *et al.* 2019), there is growing attention placed on collaboration in infrastructure development. In recent times, the concept of Relational Contracting (RC) has highlighted the importance of collaboration in construction projects (Ling *et al.* 2013, Ling *et al.* 2015, Memon *et al.* 2015, Jelodar *et al.* 2016a).

Studies of relational contracting in construction have typically underscored the temporary nature of construction projects (Ning and Ling 2013), which means that new relationships between parties are continually formed and that there is limited time to build trust through familiarity. Thus, participants have to be pragmatic and trust each other in expectation that others can be depended upon to drive collaboration. In other words, they must use "swift trust" (Engebø *et al.* 2020a,

Loosemore *et al.* 2020). RC in construction has gained popularity in response to the complexity of projects and the inadequacies of traditional organisational and operational methods (Hosseini *et al.* 2017).

The shift towards more collaborative contracting relationships has increased the number of partnering agreements for sustainable development goals (United Nations 2020). Several Relational Contracting strategies have emerged over the years, including models such as Project Alliancing (PA), Project Partnership (PP), Integrated Project Delivery (IPD) (Rahman *et al.* 2007, Walker and Lloyd-Walker 2015). While various types of contracts are available, the "degree of relationalism" varies based on the different contract characteristics (Cheung *et al.* 2006, p. 51).

In planning a project, it is crucial to recognise the close relationship between design and construction and the various construction strategies available. The Project Manager (PM) is expected to possess the ability to manage and encourage individuals and teams, while skilfully progressing the project to completion and achieving the project's goals (Walker and Lloyd-

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Walker 2015). There is a challenge about how to bridge the gap between the design and construction interface to improve communication and handover between phases (Alarcón and Mardones 1998). A fragmented delivery process results from design and construction teams': (1) lack of knowledge sharing; (2) missed opportunities for innovation and knowledge development, and; (3) the free-riding problem—"where each stakeholder (designer or builder) takes the easiest path to achieve their individual goals and ends up putting the burden on the other stakeholder" (De la Garza and Pishdad-Bozorgi 2018, p. 4). For practitioners, the success of interorganisational relationships strongly relies on how they (practitioners) collaborate. The choice of strategy affects how interorganisational relationships happen between design and construction. Some research has pointed out that a transactional strategy, governed by the contract, can limit interorganisational collaboration (Cao and Lumineau 2015).

First, the incompleteness of contracts may not "contain adequate contingency clauses and are more likely to be ineffective to regulate each party's behaviours in unexpected situations" (Cao and Lumineau 2015, p. 17). Traditional contracts attempt to predict and specify all possible eventualities; therefore, coping with change is treated like an "anomaly", which can lead to difficulties when undefined conditions arise (Sakal 2005, p. 67).

Second "contracts may signal a lack of trust, which is detrimental for cooperative interorganisational relationships" and could "lead to disputes and trust deterioration" (Cao and Lumineau 2015, p. 17) and third, contracts, when applied, can evoke different behaviours between cooperative parties (Cao and Lumineau 2015). Thus, the use of a transactional strategy is a strategic choice that may affect interorganisational relationships and how they collaborate in design and construction.

Changes in expectations have also provided a stimulus towards redefining strategies used in construction. The increasing requirements by clients and stakeholders for innovative and sustainable buildings, coupled with the shortcomings of transactional contracting<sup>1</sup>, have contributed to an impulse and momentum towards a more collaborative process in construction projects (Palaneeswaran *et al.* 2003, Yeung *et al.* 2012a, Chen and Manley 2014, Ling *et al.* 2014a, Ning and Ling 2014, Fernandes *et al.* 2018, Jobidon *et al.* 2018).

While the collaborative process requires new ways of coordinating and cooperating (Williamson 1985,

Colledge 2005, Harper *et al.* 2016, Jobidon *et al.* 2018), empirical evidence shows that practitioners in practice are often locked in using more conventional ways of doing things (Cheung *et al.* 2006); practitioners revert to old habits and traditional working practices (Kumaraswamy *et al.* 2005b, Howard *et al.* 2019, Kalsaas *et al.* 2020).

Collaborative processes require coordination and cooperation, and norms have long been used to reflect behaviour in relations. (Herein throughout the term "norms" is used as the essential characteristics of contracts that can be variably applied.)

This paper builds on Ke *et al.* (2015a) 's formative work, which examines relational contract theory (Macneil's contractual norms) in formal contracts and connects the norms to the actuality in projects, by mapping contract terms back to relational contract theory.

RC theory, in its original form, has evolved based on the ten norms by I. R. Macneil. According to Macneil, all contracts have ten expected behaviours (common contract norms), variably applied whether transactionally or relationally. The ten norms; Contractual solidarity, Effectuation of consent, Power creation, Propriety of means, Reciprocity, Role integrity, Flexibility, Harmonisation, Implementation of planning and Cohesive norms (restitution, reliance and expectation), relate to understanding the exchange between parties (Macneil 1973, Macneil 1977, Macneil 1999).

Ivens and Blois (2004), who critically reviewed Macneil's contribution to the research field, noted that when researchers examine the norms, there is a tendency to use a "subset of Macneil's norms" and that norms affect behaviour in relationships (p. 258). They (Ivens and Blois) argued that there is a need to "develop operationalizations of the norms which take into account the different norms applicable to both discrete and relational exchanges" (p. 258). In other words, "provided a framework both for understanding exchanges and analysing them" (p. 258).

Ivens and Blois (2004) have raised the fact that there are methods issues in operationalisation of the ten norms in research; however, several authors have attempted to operationalise the norms in studies of project integration and the degree of relational content in projects. Some examples are Harper *et al.* (2016), who operationalises eight of the norms, using a survey to measure project integration in traditional projects, noted that there was a "need for a systematic approach for measuring integration of a team throughout design and construction of a project" (p.

1) that focuses “on comparisons between the level of integration and the achievement of a successful project” (p. 10). On the other hand, Jobidon *et al.* (2019), who builds on Harper’s work, takes the norms as a starting point to analyse construction contract language to understand contracts as governance tools within different strategies.

Other authors like Engebø *et al.* (2020b) reviewed relational aspects of RC, specifically management strategies and argued for “a comprehensive review of the current state of research on collaborative project delivery methods” (p.281), and point out that project delivery methods, i.e. strategies, give relevance in understanding collaboration in interorganisational relations because of their cause-effect relationships. Engebø *et al.* (2020b) further add that collaborative strategies

include contractual elements that promote collaboration, and it looks like a common perception that the more contractual elements, the better. However, the elements respective contribution to collaboration is unclear (p.296).

As such, Engebø *et al.* (2020b) argue there is a need for more research on the “cause-effect relationship regarding the topic of project delivery methods” (p. 296), i.e. strategies.

While Ke *et al.* (2015a), work is valuable in scoping the foundations for measuring the norms in the outcomes of projects, its focus was primarily “about contractual language” (p. 175). Ivens and Blois (2004) work centres on the norms in business-to-business exchanges (B2B) in marketing. Harper *et al.* (2016) work focus is using a subset of the norms to measure project integration using qualitative analysis (questionnaires) in traditional projects, whereas Jobidon *et al.* (2019) focus is on contractual law and the language used to depict governance in a traditional and relational project. Engebø *et al.* (2020b) work focuses primarily on isolating high-level trends within relational aspects of RC, specifically management strategies.

In the appraisal of previous studies, the issue of strategies and outcomes is fundamental to all aspects of examining the validity of determining the relationality of the exchange, given that strategies are associated to outcomes as components in delivery of any construction endeavour (Ke *et al.* 2015b). Examining the norms and their dimensions is therefore significant. This said, a missing connection between mapping the project strategies and their outcomes back to the theory is a knowledge gap. There is an acknowledged need to undertake further research to arrive at

a more nuanced understanding of the relationship between the RC elements (Yeung *et al.* 2012a, p. 237).

Answering this call, the aim of this paper is to contribute to this theoretical stream in RC research by examining relational contract theory, i.e. Macneil norms and their influence on management strategies and project outcomes.

This research makes a number of important contributions. First, the link between mapping the project strategies and their outcomes back to the theory is missing from earlier studies, and this omission matters because it concerns the role played by relational contract theory, i.e. Macneil’s norms. The norms play an important role “regarding the content of the relation, the formation of parties, obligations and the actual operation of the contracts” (Diathesopoulos 2010, p. 4). Research covering both strategies and outcomes by using Macneil’s norms would address the gap in understanding relational contracting and its influence on collaboration in determining project outcomes.

Second, it contributes to two priority areas which Ivens and Blois (2004) argue should be the focus of RC research: examining not just a subset of Macneil’s norms but all ten of the norms and operationalising of the norms taking into account both discrete and relational exchanges, in this case assessed through the outcomes of construction projects.

Third, no known studies utilise a systematic literature review to capture comprehensively previous writings on the subject. Adopting a systematic review approach provides validation for many decisions based on evaluating all the evidence. Mulrow, in Booth *et al.* (2016, p.11), argued that “reviewing in this way is a search for the whole truth rather than a part of it”. Many literature review studies often fail to remove evidence selection bias by identifying favoured literature on the topic; thus, this approach helps to reduce method issues by employing a more holistic way of analysing the influences of relational contract theory, i.e. Macneil.

Fourth, defining RC can be challenging as there is no agreement or consensus on the characteristics despite the increase in RC (Yeung *et al.* 2012a). Criticisms from English and American judicial systems have argued for a definition of RC as subsequent decisions have generally recognised the relational contract concept. However, still, no precise definition of the term has emerged (Collins 2016). The reason lies in the difficulty of ascertaining a definition as different (theoretical) perspectives exist. The diverse number of definitions, arising from various viewpoints and by researchers from assorted disciplines, has resulted in

the concept evolving into a multifaceted concept without a single agreed interpretation. While having a vast array of definitions of relational contracting allows for an understanding from different perspectives, on the other hand, it blurs our vision of understanding and makes it difficult to agree on what encompasses a relational project, which is why a systematic review is appropriate in laying open these different perspectives and lays the groundwork for a definition which is required as a primary starting point necessary when discussing the subject (Yeung *et al.* 2012a).

In addition, previous studies have used relational terms or subsets of norms and, in so doing, dilute the importance of Macneil's ten norms which play a significant part in encouraging relationships within and between organisations if and when norms are employed relationally (Faisal *et al.* 2005). So, this review aims to evaluate published evidence using the framework of Macneil's ten norms, and it should be helpful for practitioners and also add to the knowledge of how the norms work together in producing relational project outcomes.

The evolution of RC in construction has emerged as a cohesive means of providing a solution for complex projects. As there has not been any known studies using a systematic review on explicit RC use in projects and their outcomes in the construction industry, the arena where the complexity of contracting and contracts meets the complexity of the construction industry can be challenging to practitioners and researchers alike. This systematic review seeks to evaluate previous studies on relational contracting to analyse the link between project strategies and outcomes using Macneil's ten norms as a framework to support this evaluation.

In this way, this paper contributes to research by consolidating the literature on the RC concept, uniquely demonstrating the link between strategy, RC theory and project outcomes and identifying the gaps in the literature and opportunities for further research.

Hence, the main research question is:

How do relational contract theory influence management strategies and project outcomes?

In order to answer this main research question; the following sub-questions have guided this review:

- What research has been done explicitly on “relational contracting” in construction?
- What is the definition of relational contracting in construction?
- What are the relational contracting strategies (i.e. management strategies used in relational projects)?

- What part do the norms play in relational project strategies and outcomes using Macneil's ten norms as a framework?

The aim of this review is to use a systematic review to establish what exactly is RC and explore the various definitions, and additionally, look at the role of contracting strategies and Macneil's norms. By differentiating RC according to the role of contracting strategies and Macneil's norms, it is possible for project managers and specialists to understand contracting strategies in RC and be able to assess its success or failure and improve an RC project's performance.

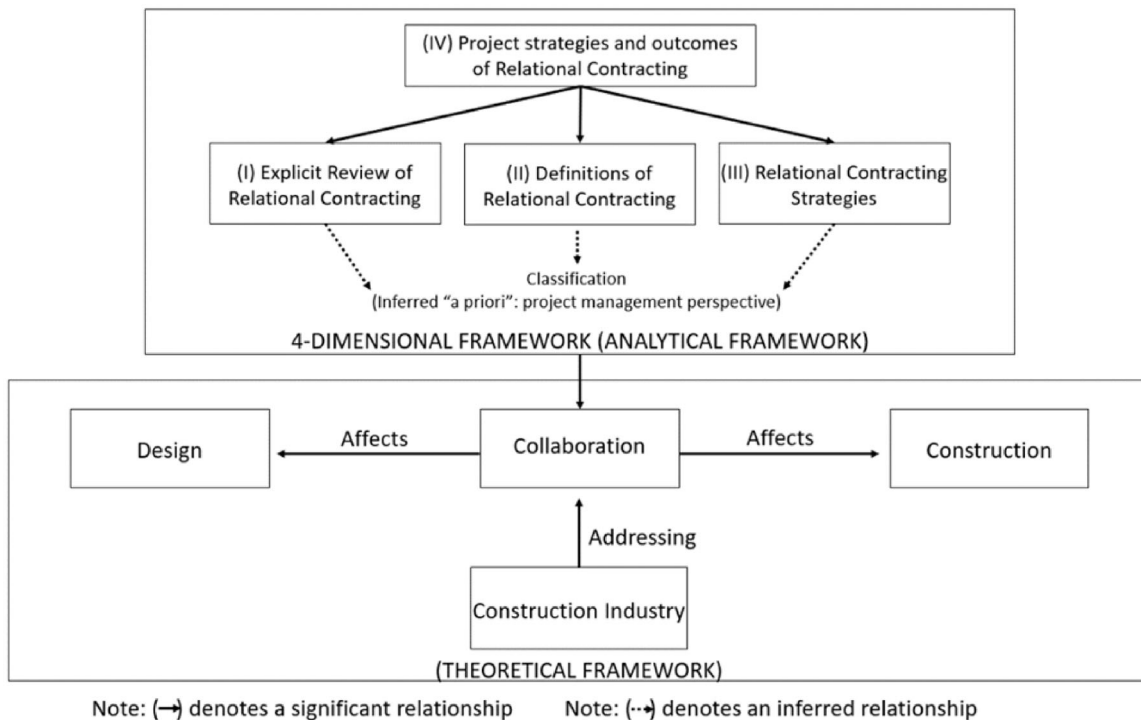
## Methods

### Analytical framework

The analytical model (Figure 1) illustrates a four-dimensional framework of the theoretical and analytical framework. The brief theoretical framework shows how the construction management research is addressing collaboration which affects both the design and construction in projects. The analytical framework illustrates that the measurement of these constructs are elaborated using “a priori” deduction to extract and synthesise findings into themes enabling a transparent assessment for other researchers and has practical implications for project managers to learn more about the topics found in project management to facilitate monitoring of projects.

Collaboration is a key part of project management and “knowledge about how elements interact and what options exist is vital” (Walker and Lloyd-Walker 2015, p. 128).

Collaboration can be defined from its root meaning “together (co) working (labor)”, and is linked to cooperation which means “(doing things)” together (Walker and Lloyd-Walker 2015, p. 63). While the two definitions sound synonymous, in projects collaboration is a team of people who work together to deliver a project, through information sharing, co-learning, sharing the same goals and effectively having a relationship (Thompson and Sanders 1998). A typology of four states of collaboration exists in projects: (1) zero collaboration where competition occurs between participants, (2) cooperation occurs when participants have low to medium congruence of goals and objectives, (3) collaboration arises by medium to high congruence of goals and with teams working together. (4) coalescing evolves when teams have high to very high objective alignment (Thompson and Sanders 1998, p. 74).



**Figure 1.** Analytical and theoretical frameworks.

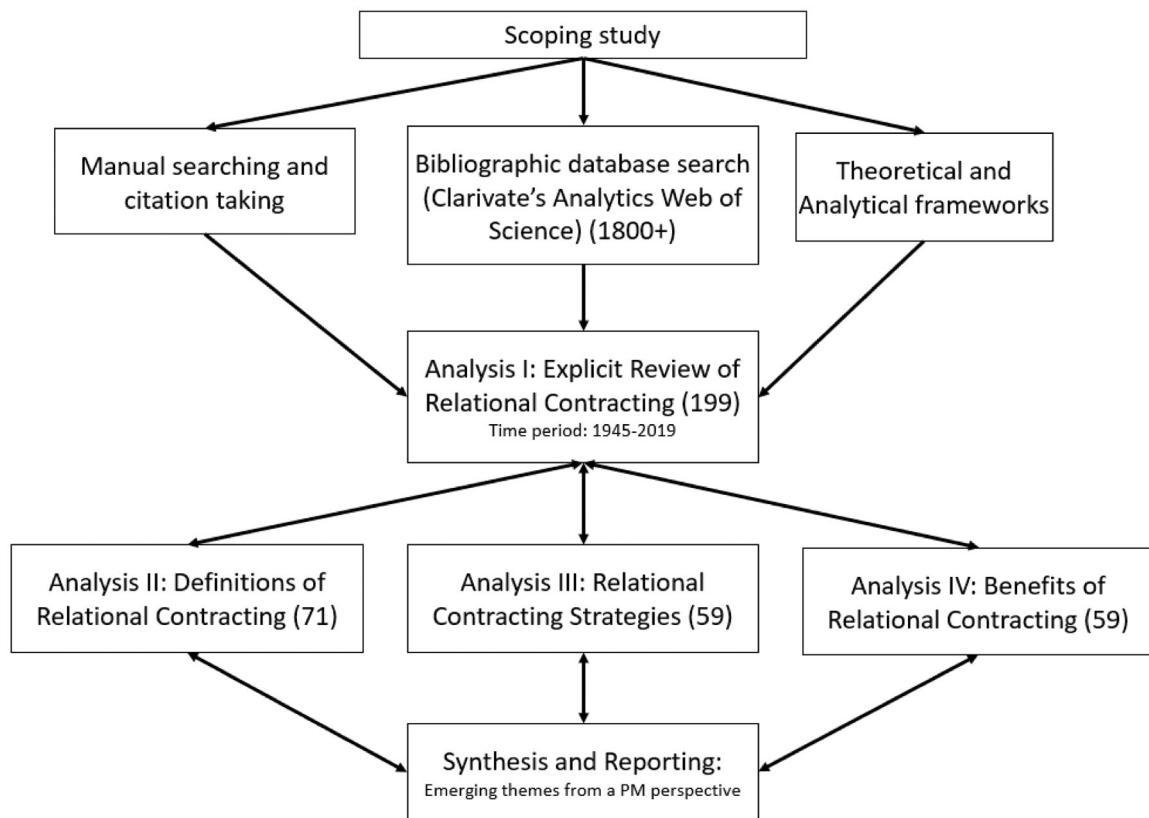
The effectiveness of collaboration is impacted by the way project team members co-learn and are able to understand each other's perspective by building social capital as a project asset to improve project delivery outcomes (Walker and Lloyd-Walker 2015). The analytical framework will be used to guide this systematic literature review.

The method adopted for the study was an iterative review and search strategy using a systematic literature review (Figure 2). The aim was to review the outcomes of relational contracting across multiple studies by identifying the bias existing in previous research, employing a comprehensive search and using applied exclusion criteria (Booth *et al.* 2016).

Figure 2 shows a summary of the systematic review process. First, a scoping study analysed specific search terms "relational" and "contracting" where over 1800+ articles emerged. Through manual searching and citation taking, the scoping study was conducted to help formulate the research questions, set out the inclusion and exclusion criteria and search terms, from initial searches of extant literature. Additionally, a theoretical and analytical framework was used to help decide which variables were necessary and significant, therefore improving the search strategy by reducing the amount of information that needs to be collected and analysed. Pherson and Pherson (2012) explained that

one must resist the urge to rush into a research project without taking time to scope out and develop a structure that will collect and organise existing and forthcoming knowledge. As a result, many research papers are without an analytic argument. Making sense of data and understanding strengthens our capacity to add rigour, by potentially outlining and adjusting to changing circumstances. The analysis was conducted in four parts using framework synthesis as an "a priori" framework to extract and synthesise findings into themes by organising, analysing and exploring inconsistencies in large volumes of data (Booth *et al.* 2016).

In Analysis I, the Web of Science (WOS) database was searched for the evolutionary development of RC-related publications between 1945 to 2019. Specific search terms were "relational contracting" OR "relational contract" where over 400 articles emerged. The term "relational contracting" had 199 articles alone. Analysis II, III & IV analysed the literature found in Part 1. In Analysis II, the results from Analysis 1 excluded Non-English language publications, books, book reviews and reports, editorials and meeting abstracts. Irrelevant abstracts and titles and inaccessible publications were also excluded. Next publications were read to assess if definitions were detectable and from these, only 71 were useful. RC papers were



**Figure 2.** Summary of systematic review process.

analysed for both objective and subjective definitions to provide more relevant and valuable social research, as subjective accounts suffer from a lack of clarity. Objectivity and subjectivity in RC definitions were found primarily by identifying subjective elements, or linguistic expressions; in other words, lexical phrases (Wiebe *et al.* 2004)

Although the subjective elements were identified, they were not used because they were categorised as flexible or soft elements which are often hard-to-measure, synonyms of the same terms, which are open to interpretation (Strahorn *et al.* 2017, Wang *et al.* 2019). However, clustering of sentences containing subjective elements (based on similarity) helped to trace back the terminology to Macneil's literary works.

Examples include "trust", "communication", "commitment" or "values". Sentences tend to be composed of a mixture of both subjective and objective language, and many expressions with subjective usages can have objective usages as well. Addressing unsure or bilateral elements required analysis of the context, rather than just individual items Wiebe *et al.* (2004).

Likewise, objective phrases were identified when the language used suggested a measurable expression was being presented, as opposed to a characteristic

which is capable of being measured but changes its value over time. The key to identifying multiple items within each definition was to count the number of factual or lexical statement items. Objective definitions provided crucial assistance in distinguishing common phrases in the development of an objective description.

In Analysis III the results from Analysis 1 were refined in the Web of Science (WOS) database by using additional search terms such as "projects" and "construction" to analyse the differences between the RC strategies in empirical studies. Again, the same exclusion criteria mentioned in analysis II was used here. Analysis of 59 articles was conducted using homogenous sampling (Booth *et al.* 2016).

Similar articles (based on one RC strategy) helped provide clearer results and provide more accurate accounts, thus facilitating identification of sub-categorical differences easier.

In Analysis IV the results from Analysis 1 were refined using the same strategy from analysis III in order to explore the outcomes of empirical projects, and 59 articles were assessed.

Firstly, the factors contributing to making a relational construction project successful or unsuccessful (benefits and disbenefits) were identified in the

literature. The “benefits and disbenefits” are characterised in this review as the outcomes when the application of the norms returns positive or negative results. For example, if the outcome lowers costs, it is seen as a benefit; however, a disbenefit if the outcome increases costs. The benefits and disbenefits were then grouped according to similar categories (themes), which were deduced from a PM perspective (a priori) theme, “project management”, identified in advance using the analytical framework) and compared to Macneil’s ten norms.

WOS is considered a universal electronic search engine that contains the most important peer-reviewed construction and engineering management journals and is used for academic quality and rigour. Consequently, rigorous efforts were made to minimise errors in the selection of studies and avoid methodological errors by assessing and examining the appropriate search terms and inclusion and exclusion criteria from the articles.

NVivo was used in data analysis as a useful supplement to reducing omissions and errors and increasing the validity of the study. Additionally, synthesis was used in all parts to organise, analyse and explore inconsistencies in large volumes of data to extract and synthesise themes (Booth *et al.* 2016).

## Analysis I: explicit review of relational contracting

### *Characteristics and challenges of relational contracting in the construction industry*

I. R. Macneil developed the relational theory of contract around about the same time as O. E. Williamson was writing about the associated subject of transaction costs (Williamson 1979). Macneil’s relational theory of contract viewed contracts not just as discrete transactions whereby an exchange occurs at a cost but, as a contract where a relationship occurs as part of the transaction (Macneil 1973). These views have helped shape and define two types of contracts: relational and transactional.

Over time RC has gained prominence in construction management research because of the shift in focus away from Transactional Contracting (TC) (Colledge 2005, Yeung *et al.* 2012b, Harper *et al.* 2016, Jelodar *et al.* 2016b, Strahorn *et al.* 2017). It has been vital for the construction industry to address the problems and challenges of using conventional contracting because they often fail to achieve successful outcomes (Hall and Scott 2019). TC is known to marginalise relational behaviour by limiting trust in relationships

between parties, thus giving the opportunity for adversarial conflict-ridden behaviour and invoking competition rather than cooperation (Rahman and Kumaraswamy 2004, Rahman and Kumaraswamy 2012, Ning and Ling 2014, El-adaway *et al.* 2017, Silva and Harper 2018). Also, most conventional contracts try to define every eventuality, stating who is accountable. They try to control behaviour by reducing risk and mitigating risk consequences. These contracts are inevitably not complete and do not eradicate “opportunism” whereby one party benefits at the expense of another (Rahman and Kumaraswamy 2004, Ning and Ling 2014). The deficiencies in TC have required that contracts promote greater cooperation partnerships of better quality and reduce adversarial conflict (Jelodar *et al.* 2016a, Mesa *et al.* 2019). Some parts of the civil construction industry have turned to new delivery models which offer alternative ways of coordinating, cooperating and managing risk (Williamson 1985, Colledge 2005, Harper *et al.* 2016, Jobidon *et al.* 2018); however, practitioners have resisted new methods and often reverted back to old habits (Kumaraswamy *et al.* 2005b, Rahman and Kumaraswamy 2008, Howard *et al.* 2019, Kalsaas *et al.* 2020).

Ke *et al.* (2015a) argued that despite this interest, the performance of relational projects had failed to meet expectations. Consolidated evidence from projects show that the project’s target cost and envisioned value for money in the business case were more likely to be not carried through. However, as experiences with RC mature and with the support of governmental guidelines, these problems can begin to be remedied (Ke *et al.* 2015b). Nevertheless, it is not just about deficiencies in cost performance, but also about increasing public requirements aimed at benefits realisation and achieving environmental and long-term sustainability otherwise known as the Triple Bottom Line (Lenferink *et al.* 2013, Walker and Lloyd-Walker 2015). As a result of attempts to counteract the problems of transactional contracting, several significant milestone events<sup>2</sup> took place (Strahorn *et al.* 2017, Jobidon *et al.* 2018), which have all promoted integrated processes and collaborative working (Kalsaas *et al.* 2020) and have influenced the rise of RC models (Ke *et al.* 2015b).

### *Defining relational contracting*

These findings show that RC can be classified more clearly according to three concepts; relational governance, relational contracts, and collaborative contracts.



### **Relational governance**

Relational contract theory includes a field of study concerned with relational governance (Jobidon *et al.* 2018). Extant literature on relational governance relates to its effect on interorganisational relationships, suggesting “that two main types of governance are at play” (Cao and Lumineau 2015, p. 15). One is relational governance which governs relationships using conditions such as trust, open communication, information sharing and cooperation in a way that enhances the working relationship between parties (Ning and Ling 2014). The second is contractual governance, where the formal terms of a contract are the mechanisms that determine how decisions are made (Roehrich *et al.* 2020).

Much debate exists about the dynamics of relational governance (Cao and Lumineau 2015, p.15); for example, Macaulay (1963), an early writer, portrayed relational governance as individuals not following the legal mechanism offered in written contracts and instead govern the relationship themselves using mutually acceptable social guidelines. However, Poppo and Zenger (2002) argued that contractual and relational governance needed to be considered as complementary mechanisms. This debate and probing of the concept were later extended by Cao and Lumineau (2015) who state that contracts could be a substitute for relational governance only if the control element is legally effective. According to Jobidon *et al.* (2018), relational governance and, similarly, contractual governance, while having complementary mechanisms, use informal and pragmatic decision-making mechanisms in a project.

### **Relational contracts**

Relational contracting differs from a relational contract as relational contracting is a philosophy or a set of principles on which a contract is based (Yeung *et al.* 2012a). In contrast, a relational contract is a contract containing elements of relational contracting; in other words, a relational contract is made up of RC practices (Yeung *et al.* 2012a, Ling *et al.* 2014b).

The implications for how people are managed will depend on the development of capabilities to manage new relationships and contracts (Edkins and Smyth 2006). It is possible for change to affect the balance of relational and contractual capabilities; for example, when a large service provider adopts servitisation, the process requires relational capabilities and, as these increase, there is a need for complementary contractual capabilities as well (Kreye *et al.* 2015). Also, the intent to make a PPP arrangement relational

sometimes fails and as a result, evolves into a discrete transaction, resulting in reversion “to traditional legalistic contracting” (Edkins and Smyth 2006, p. 92).

### **Collaborative contracts**

Another approach is Performance-Based Contracting (PBC) used in the defence industry to encourage collaborative behaviours by linking supplier payment to performance (Selviaridis and Wynstra 2015, Howard *et al.* 2016). PBC or incentive-based contracting is similar to relational contracting; however, it can be used in both relational and transactional contracts. The problem with incentive-based contracting is that it can unknowingly produce inconsistent contracting behaviours (Levin 2003, Eriksson 2010). For example, suppliers may easily “intentionally misreport their performance (gaming) to receive full payment” (Selviaridis and Wynstra 2015, p. 3517). While formal contracts can drive transactional behaviour through commercial measures, the more informal relational contracts motivate behaviours through social interaction and relational sanctions.

Lu (2016) argues that control measures linked to the agent in the form of deliverables or relational performance can be subject to gaming and that focus should lie on relational performance-based measures applicable to the agent linked to the outcomes of the project.

While performance-based contracting is similar to RC, “not all aspects of performance can be clearly defined and measured” in contracts (Lu 2016, p. 25), and this might inevitably lead to gaming (i.e. intentional misreporting of performance) which can contribute directly to unsatisfactory performance.

However, the relational side of contracting builds relationships and trust with actors and performance-based contracting can be used as a supplementary measure to support this endeavour. Additionally, performance-based contracting and RC differentiate in how performance measures are established as the owner aligns the parties’ performance in performance-based contracting contracts, whilst in RC, the parties mutually agree performance measures (Levin 2003).

This is an example of mutual alignment of goals in RC and the importance of the mechanisms and incentives at play in construction projects and a greater understanding of the terms of the relationships can be explained through the design of contracts.

### **Challenges and benefits of contracting**

The design of contracts can be instrumental in understanding the challenges and benefits of contracting;

for example, a contract that shares the benefits and burdens (in other words, the sharing of risk and rewards), in essence, makes agents stakeholders in projects and enforces organisational alignment while at the same time diminishing the hazards of opportunism (Macneil 1973, Williamson 1979, Williamson 1988, Sakal 2005). Highly complex and uncertain projects are able to strategically align using a contract's "associational core" (based on resource sharing and equity ownership) thus aligning desires and goals through mutual benefit sharing (Grandori and Furlotti 2006, Kapsali *et al.* 2019).

The design of governance structures can also safeguard and optimise relationships by reducing self-interest (Williamson 1979). Formal governance mechanisms, typically set through specific terms and clauses in legal contracts, can be challenging, and contracts can be incomplete, allowing opportunism and intellectual property rights to be weak (Williamson 1979). In reality, most contracts are "incomplete" due to the drafting cost and the inabilities of contractual parties to envisage all contingencies in the future exchanges (Zheng *et al.* 2008).

However, the completeness of contracts can be "light" through the use of a variety of coordination mechanisms thus allowing for flexibility by procedures dictating "actions in unforeseen contingencies, through the entitlement of some parties to decide (being it a private joint-decision system, a private authority or a public court)" (Grandori and Furlotti 2006, p. 4)

Formal governance mechanisms can also lead to more "cumbersome, overregulated, and impersonal processes" by their prescriptive procedures (Howard *et al.* 2019, p. 626); nevertheless, they are designed for clear and equitable risk allocation (Chen and Manley 2014).

Contrary to formal contractual mechanisms, the informal governance mechanisms which can function as mitigation against the hazards (uncertainty) targeted by formal controls allow for creativity, flexibility and trust which improves the performance of interorganisational exchanges (Poppo and Zenger 2002, Jobidon *et al.* 2018). However, informal governance mechanisms can also lock in relationships by relationally embedding them in relational inertia, causing organisations to feel compelled to honour obligations, not in their self-interest (Howard *et al.* 2019). While the design of relational contracts can be characterised as being based on procedures as opposed to being "substantive", the design of relational contracts are also "both adaptive and protective of differentiated

interests under strong uncertainty" (Grandori and Furlotti 2009, p. 84). Other coordination mechanisms can also be of benefit if written into RC contracts such as; "hierarchical coordination (more or less delegated), joint decision making (team like, negotiated, or representation based), and rules (varying in their degree of generality)" (Grandori and Furlotti 2009, p. 86).

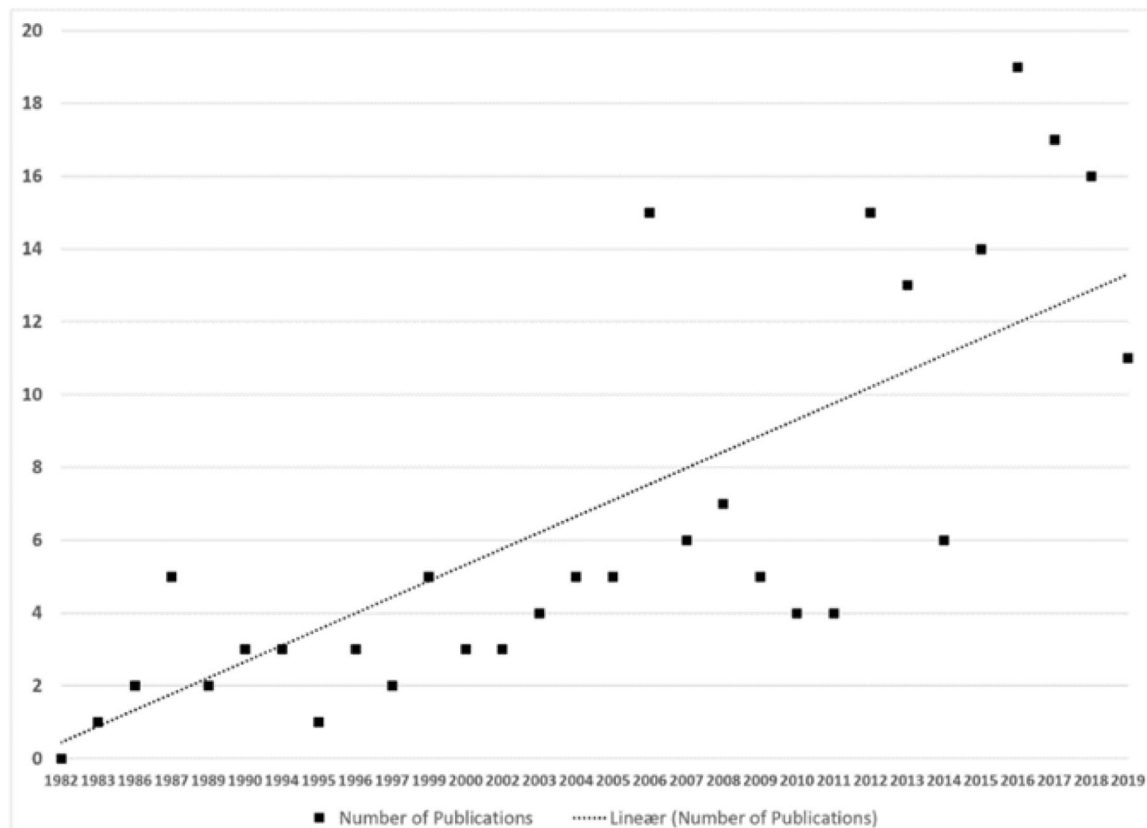
Nevertheless, highly relational projects (projects at the relational extreme of Macneil's relational spectrum) can have converging and diverging governance mechanisms in long-term interorganisational relationships (Howard *et al.* 2019). For example, formal and informal governance may become temporarily decoupled with one acting functionally and positively ("safeguarding interests, clarifying roles and responsibilities and multi-party coordination, adaptation, learning and sense-making") and the other negatively in its function ("arising from weaknesses such as incomplete contract design or intellectual property rights") (Howard *et al.* 2019, p. 626).

While informal and formal mechanisms have different challenges and benefits, if organisations do not agree on which governance mechanisms to use, they can have converging and diverging results (dysfunctional relationship). However, this can also be positive if the overall relationship atmosphere is good (finding your way through) (Howard *et al.* 2019). Although dysfunctionalities appear over time, contractual and relational governance need to be considered as complementary mechanisms (Poppo and Zenger 2002). In essence, the benefits of contracting can be brought out depending on the design of the contract and the coordination mechanisms which can be used to help explain how people will work together. That way, contracts are designed to include clearly articulated clauses that penalise and allow for cooperation which can help to limit the gains from opportunistic contracting by promoting cooperative behaviour (Poppo and Zenger 2002).

### ***Findings from relational contracting***

Relational contracting is mostly mentioned in economics, project management, business and civil engineering journals and could be found in multiple streams of literature, including Civil and Industrial Engineering, Construction & Building Technology, Management, most of which are written by American, English, Chinese and Australian authors. Figure 3 shows the trends in RC.

The term relational contracting is increasingly occurring in the scientific database of WOS from 1982 to 2019. However, several times there has been a



**Figure 3.** Evolutional development of Relational contracting (RC).

decline in articles followed by a subsequent rise, the three peak periods occurring in 2006, 2012 and 2016. The reason for declines and peaks is not known. Chen and Manley (2014) claim that other names and terms have evolved like “collaborative procurement models” (CPMs), which have been most active from 2000 to 2013. Most prominent countries for RC research include the US on Integrated Project Delivery (IPD) and Lean project delivery (LPD) and the Australian and Finnish public sector on Project Alliance (PA). However, despite RC being labelled under different terms, it is widely employed and in a growing body of work.

### **Macneil’s ten norms**

Macneil’s work incorporated together social norms of behaviour and legally framed contracts of exchange (Macneil 1973, Macneil 1977, Macneil 1999). These contract norms (Table 1) represented the expected behaviour of participants in a transaction.

Macneil maintained that contracts vary from discrete (transactional) at one end of the spectrum to relational at the other, but the ten norms are present in all. Similarly, each norm has a spectrum from discrete to relational. Discrete contracts and relational

contracts concentrate on the norms most apt for their purpose, and interpret the norms in a different way likewise, to fit with the contract’s emphasis. Relational contracting models have developed slowly in the construction industry, starting with a general impetus towards a more collaborative way of working and then leading on to more comprehensively relational models. There was a need to study these new types of arrangements. Macneil’s norms have formed a basis of reference in the construction literature, and some studies have operationalised the norms to use as a measurement tool for assessing integration and project success (e.g. Harper *et al.* 2016, Jobidon *et al.* 2019). Critics have argued that past conclusions can be distorted if Macneil’s full set of ten norms are not employed (Blois and Ivens 2007). Researchers have employed the norms either in content analysis of contracts, matching them with terms used in interviews or using the norms in the generation of survey questions (Ke *et al.* 2015a, Harper *et al.* 2016, Jobidon *et al.* 2019). These results were often unreliable because the focus is often on contracts and not on governance. Furthermore, attempting to frame questions linked to all ten norms produced lengthy surveys and interviews, so coupled with the difficulty to secure sufficient responses meant that past results were

**Table 1.** Macneil's common contractual norms and extremes.

Norms	Definitions	Transactional extreme	Relational extreme
Contractual Solidarity	Contractual solidarity relates to the mentality of the stakeholders, belief in assisting each other even during adversity.	Low level of trust and a competitive and conflict-ridden atmosphere.	High level of trust and a cooperative and collaborative atmosphere.
Cohesive norm or linking norms	Norms that try to maintain the exchange and unity between stakeholders. Such as restitution, reliance and expectation	Broken promises; inability to depend on other parties; no reassessment of gains.	Promises kept and completed; Interdependency; reassessment of gains.
Power or creation and restraint of power	Power is divided between the parties. Relates to the control of power and limitation (and if possible, elimination) of exploitation	Organisations seeking control to leverage power; opportunistic behaviour.	Organisations not controlling and refraining from using their powers; Sharing of mutual benefits.
Propriety of means	Propriety of means is organisations having the ability to perform their commitments.	Use of advantageous or imposed means to maximise individual interests.	Use of adequate means or freedom of choice to achieve the project objectives;
Reciprocity	Reciprocity ensures fairness in the exchange. Mutual benefit occurs through collaboration and sharing of both gains and liabilities in a project.	Allocation of benefits and burdens to maximise individual interests.	Sharing of risks and rewards; maximisation of collective interests.
Role integrity	Role integrity is where organisations are expected to behave correctly to fulfil obligations and project objectives	Individual concerns are taking precedence over collective concerns; simple and defined roles.	Collective concerns overriding individual concerns; complex and multidimensional roles;
Flexibility	Flexibility is the facility to change during the relationship and adapt to external and internal situations.	Rigid agreement which is difficult to adjust or adapt to changes.	Supple agreement with the ability to modify or adapt to changes.
Harmonisation	Harmonisation requires the shared values of society, such as freedom, human rights, environmental matters, and mutual accommodation harmonised in the social matrix.	Strict and rigorous application of the contract; dispute resolution in courts.	Contract is not employed or referred to in the relationship; internal dispute resolution; waiver of claims; no dispute.
Implementation of planning	Implementation of planning involves planning the future performance and risks associated with executing the relationship.	One-sided control of terms; propensity for preliminary planning instead of future planning	Use external standards to plan performance; adjustments along the way; agree as you go along.
Effectuation of consent	Effectuation of consent is the causal mechanism for agreement in the exchange or the perception of having choices (often not free of pressure).	One absolute choice; restriction of future opportunities; formal rationality.	Agree as you go along; indeterminate choices; substantive rationality.

Adapted from Jobidon et al. (2019).

unreliable since researchers have tended to base their results on opinions (Harper *et al.* 2016, Jobidon *et al.* 2019). Furthermore, Blois and Ivens (2007) argue that the measures developed in empirical studies fail to capture all the norms, often only capturing a small subset.

### **Analysis II: definitions of relational contracting**

The definition of RC has been mentioned by several authors; however, only a few made it their particular focus (Colledge 2005, Yeung *et al.* 2012a). Existing literature offers mainly subjective factors, categorised as flexible or soft elements which emphasise improved human interaction in relationships. While subjective terms are not meant to be true or false; they can be misunderstood or give alternative meanings. For

example, consider the subjective sentence by Silva and Harper (2018), who describe RC as “projecting exchange into the future” (p. 683). This sentence could refer to projecting future relationships after a project is finished, projecting future relationships while a project is ongoing, or projecting future exchange in the context of the transaction. The context can be interpreted differently compared to temporary construction projects or those that can take a longer-term view, particularly large projects, where public-sector clients and private sector corporate real estate owners have a portfolio of buildings<sup>3</sup>.

Other examples which can be found in subjective sentences defining RC include increasing levels of: “trust”, “communication”, “commitment”, or “values” (Fernandes *et al.* 2018). Each subjective term can mean many things, depending on individual

experiences of the phenomenon (e.g. trust), meaning each individual has different experiences of trust (Strahorn *et al.* 2017). For example, “trust”, fundamentally hard-to-measure, can mean, without a benchmark, any varying degree of achievement in confidence (Strahorn *et al.* 2017, Wang *et al.* 2019). Other popular subjective terms which can be vague or misinterpreted are communication, collaboration and ongoing commitment (Kumaraswamy (Rahman and Kumaraswamy 2004, Kumaraswamy *et al.* 2005a, Kumaraswamy *et al.* 2005b).

Unsurprisingly Macneil’s works have been a significant influence, with over 60% of articles commonly citing his seminal works on relational contract theory in a definition of RC.

While subjective and objective perspectives are beneficial in giving alternative viewpoints, this systematic review summarises findings and takes an objective perspective, helping to reduce bias in selection and reduce the number of subjective terms, thereby making evidence available and more accessible to decision-makers.

In order to find a consensus on the definition of RC and learn and improve for future decision making, this section provides a critical reflection on the emerging key themes found through objectivity see Table 2.

The substantial core of RC objective definitions derives from contractual components. The results show that many definitions refer to the “contract” which often is referenced to Macneil’s Relational Contract theory (Palaneeswaran *et al.* 2003, Colledge 2005). However, Macneil did suggest that relational elements exist to some degree in all contracts (Jelodar *et al.* 2016a, Jelodar *et al.* 2016b). The objective definitions are mainly concerned with contractual development which is a necessity in the challenges that project managers face in contract management.

First, contractual arrangements need an agreement requiring collaboration from all contractual parties in specifying equal terms and conditions. According to Steinle *et al.* (2014), alignment issues arise in post-contractual discussions, as partners can engage in opportunism even before the actual formation of a relationship (Ex-ante opportunism), which can erode trust before contractual completion.

Second, contracts should avoid and mitigate risk by having a flexible adjustment and a willingness to adapt to unforeseen and unpredictable circumstances occurring in due course. However, PMs should be aware that risk is not one-sided; relationships have numerous parties involved, who need to accept changing their behaviour as events unfold (Jobidon

*et al.* 2018). Sakal (2005) argued that RC is more about the participants agreeing on handling change than on specifying all the possible changes that could occur in the contract (relational governance). A mutual understanding of handling change allows RC to be flexible and respond well to situations where unforeseen risks are prevalent. Higher flexibility in contracting suits the construction industry where many uncertainties and unforeseen events exist, leading to the possibility of better time performance, thus lowering construction costs (Ning and Ling 2014). Macneil (1980) described the difference between a straightforward exchange and a situation where cooperation is crucial such as where a large number of actors each with different skills work together. Similarly, the multiskilled environment of construction projects are not straightforward and require, therefore, an emphasis on relationships (Colledge 2005).

Third, concerns exist on the use of transactional contracting lacking complete contracts for social regulation in projects (Zheng *et al.* 2008, Ke *et al.* 2015b). Embedding social norms into the foundation of the contract establishes a “society of principles” where the parties contractually agree to adopt a set of social norms (Jobidon *et al.* 2018, Hall and Scott 2019). Another concern is inconsistencies in the reliability among contracting parties, which plays an active role in trust in projects, and such issues remain highly contested (Kumaraswamy *et al.* 2005a).

Fourth, a subset of the literature highlights definitions of relational governance as the crucial element in RC. Relational governance works through the creation of a flexible governance framework to sustain and manage the relationship over time, ensuring continual alignment. Relational governance mechanisms are mutually developed which are used to aid in self-governance (Cao and Lumineau 2015). Conflict resolution is an essential part of addressing the problems which often arise in the construction industry. The literature suggests that a governing body, outside the project team similar to a “dispute resolution board”, could help resolve these disputes (Ling *et al.* 2006, Yeung *et al.* 2012a, Ling *et al.* 2015, Memon *et al.* 2015, El-adaway *et al.* 2017) and avoid adversarial environments (Ling *et al.* 2006, Gransberg and Scheepbouwer 2015). However, disputes during construction projects while counterproductive to the progress of the project, are not eliminated (Yates and Duran 2006a). Concerning the use of relational governance, a structure of mechanisms for managing the relationship may offer each party greater confidence

**Table 2.** Classification of objective definitions of relational contracting.

Definition	Theme classification
"A relational contract is an agreement whereby all contractual parties collaboratively work together under the same conditions" (Abd El-Moneim et al. 2017, p. 35).	Contracting Collaboration
"A contract is fundamentally about cooperative social behaviour and that contracts containing significant relational elements are the predominant form of contracting" (Cheung et al. 2006, p. 50).	Social Norms
"A transaction or contracting mechanism that seeks to give explicit recognition to the commercial "relationship" between the partners. In essence, responsibilities and benefits of the contract are apportioned fairly and transparently, with mechanisms for delivery that focus on trust and partnership" (Colledge 2005, p. 30).	Contracting mechanisms
"Organisational systems and procedures expected to provide scope for relationship development" (Edkins and Smyth 2006, p. 85).	Relational Governance
"Contracts that specify binding criteria for the behaviour of the stakeholders in the contract" (Gransberg and Scheepbouwer 2015, p. 74).	Relational Governance
"Aligns project objectives with the interests of key participants ... flexible determination of risks ... where parties embrace unforeseen and unpredictable events as being inherent to the maintenance of a long-term contractual relationship" (Jobidon et al. 2018, pp 2–24).	Risk, Project alignment
"A process to establish the working relationships between the parties through a mutually developed, formal strategy of commitment and communication aimed at win-win situations for all parties" (Kumaraswamy et al. 2005b, p. 1066, Yeung et al. 2012a, pp. 226–230, Memon et al. 2015, p. 2, Mesa et al. 2019, p. 400).	Relational Governance
"Parties who do not always follow the legal mechanisms in the written contracts. The parties themselves govern the transactions within mutually acceptable social guidelines", (Kumaraswamy et al. 2005b, p. 1066, Yeung et al. 2012a, p. 226, Ling et al. 2014b, p. 276, Memon et al. 2015, p. 2) "and from this relationship emerge the obligations among the parties" (Kumaraswamy et al. 2005b, p. 1066, Memon et al. 2015, p. 2).	Relational Governance
"Based on recognition of mutual benefits and win-win scenarios through more cooperative ..relationships between the contracting parties" (Palaneeswaran et al. 2003, p. 572, Rahman and Kumaraswamy 2004, p. 148, Ling et al. 2006, p. 57, Rahman and Kumaraswamy 2008, p. 48, Yeung et al. 2012a, p. 226, Ling et al. 2014a, p. 1, Ke et al. 2015a, p. 176, Ke et al. 2015b, p. 2, Ling et al. 2015, p. 172, Mesa et al. 2019, p. 401).	Contracting Collaboration
"Considers contracts to be relationships among the parties, in the process of projecting exchange into the future" (Ling et al. 2006, p. 57, Rahman et al. 2007, p. 76, Rahman and Kumaraswamy 2008, p. 48, Ling et al. 2014b, p. 275, Ke et al. 2015a).	Relational Governance
"Between the principal contracting parties sustained by the significance of projecting exchange into the future" (Silva and Harper 2018, p. 683).	
"All contracts except the fully transactional carry a relational element" (Jelodar et al. 2016a, p. 1005, Jelodar et al. 2016b, p. 1)	Contract: Relational Elements
"Apart from the fully transactional contract, all other contracts are relational" (Yeung et al. 2012a, p. 226)	
"Contracts should cater for the proposed transaction, especially in the face of uncertainty and complexity, why people cooperate and why some specific measures are to be crafted in contract" (Yeung et al. 2012a, p. 226).	Contracting: Risk
"Derives from the way in which strong commercial relationships are developed and sustained for the mutual benefit of all parties" (Ballard and Howell 2005, p. 33)	Contracting mechanisms Relational Governance
"This longer duration, each party ... then forms a relationship" (Harper et al. 2016, p. 2).	Interorganisational relationships
"Formal contract is complemented by relational contracts..., in which contracting parties adopt relational contracting (RC) behaviour and practices" (Ling et al. 2015, p. 170).	Relational Governance
"Seek to bind parties to one another through social and cognitive psychological mechanisms as they jointly pursue project objectives" (Hall and Scott 2019, p. 134).	Contracting mechanisms
"As a way to maximise project outcomes in a complicated environment by adopting a conscious approach to build up and manage relationships alongside the cooperative application of ever-improving project processes" (Mesa et al. 2019, p. 400).	Relational Governance
"A process to establish and manage the relationships among parties that aims to remove barriers, encourage maximum contributions, and allow all parties to achieve success" (Memon et al. 2015, p. 2).	Relational Governance
"Informal arrangements such as verbal agreements, letters of intent or even a "gentlemen's agreement" (Ling et al. 2015, p. 172).	Relational Governance Social norms
"To generate an organisational environment of trust, open communication and employee involvement" (Yeung et al. 2012a, p. 226, Mesa et al. 2019, p. 401).	Social norms Relational Governance
"A relational contract .. can be understood from two aspects. One is "relational", emphasising flexible factors .. The other is "contract" .... the power of punishment"(Wang et al. 2019, p. 342).	Relational Governance
"Contracts where there is a legal connection between or among businesses" (Yates and Epstein 2006b, p. 168)	Contractual governance
"Mini society with a vast array of norms beyond those centred on the exchange" (Ballard and Howell 2005, p. 60, Hall and Scott 2019, p. 134, Jobidon et al. 2019, p. 6).	Embedded social norms

to safeguard against future eventualities (Zheng et al. 2008).

Ling et al. (2015) explains that relationships are managed through a formal contract complemented by a relational contract. One contract stipulates details about the exchange and the other the relationship

between the parties. Also Colledge (2005) points out that the people in the relationship act as a contracting mechanism in (self-managing) the relationship. In reality, the economic model is an element of equal importance which can either align or conflict interests in a relational contract (Colledge 2005). However,

**Table 3.** Classification of literature by predominant strategy type.

Categorisation	Strategy type	Number	Source
Full	Partnering	4	(El-adaway et al. 2017, Gransberg and Scheepbouwer 2015, Hosseini et al. 2017, Yates and Duran 2006a)
Full	Project Alliance (PA)	2	(Fernandes et al. 2018, Gransberg and Scheepbouwer 2015)
Hybrid	Early Contractor Involvement (ECI)	3	(Chen and Manley 2014, Lahdenpera 2016a, Lahdenpera 2016b)
Full	Integrated Project Delivery (IPD)	5	(El-adaway et al. 2017, Hall et al. 2018, Hall and Scott 2019, Jobidon et al. 2018, Mesa et al. 2019)
Fragmented	Private-Public Partnership (PPP)	3	(Edkins and Smyth 2006, Jagannathan 2017, Lenferink et al. 2013)
Full	Lean Project Delivery (LPD)	1	(Mesa et al. 2019)
Full, Hybrid, Fragmented	All strategy types*	1	(Yeung et al. 2012a)
	Others**	29	

Notes: \* Some studies explore more than one strategy, \*\* Studies of a conceptual or mixed nature.

there are differences in emphasis in contracts. Relational contracting can still be governed through contractual mechanisms, depending on how the contracts are written (Lahdenperä 2012). Incentives in relational governance frameworks can influence relationships and improve project outcomes (Cao and Lumineau 2015, Selviaridis and Wynstra 2015). Similar research highlights the barriers to adopting RC in public projects: Lack of experience/knowledge; cost and time to conduct RC; adversarial environment; misalignment among project participants; and uniqueness of public projects (Ling *et al.* 2014b). Relational contracting can be described in various ways, but there is no universally accepted definition.

The resulting analysis gave rise to an example of an objective description of RC as a two-part contract that seeks to describe the legal obligations and how the relationships will be governed between parties allowing stakeholders the power to govern themselves by using the contract as a mechanism towards flexible adjustment to change. A mini-society is created, which handles dispute resolution by avoiding litigation in the first instance and shares risks to a point where it creates stakeholders of the project.

For this review, the second research question examined the definition of relational contracting in the construction industry. Findings have shown that there is a great deal of ambiguity in the definition of RC, originating from the many subjective definitions from the seminal works of Macneil which have been transformed, causing opacity of the literature. While objective definitions can be operationalised for PMs to form a basis for a better understanding of the essential contractual components needed to develop relational contracts, the problem of incomplete and vague information still characterises many relational projects.

### **Analysis III: relational contracting strategies**

The focus of this section is to examine the characteristics and differences in RC strategies. This review

identified relational contracting strategies by focussing on articles that are alike (homogenous sampling) that investigate one type of RC strategy to help understand and describe a particular group in depth.

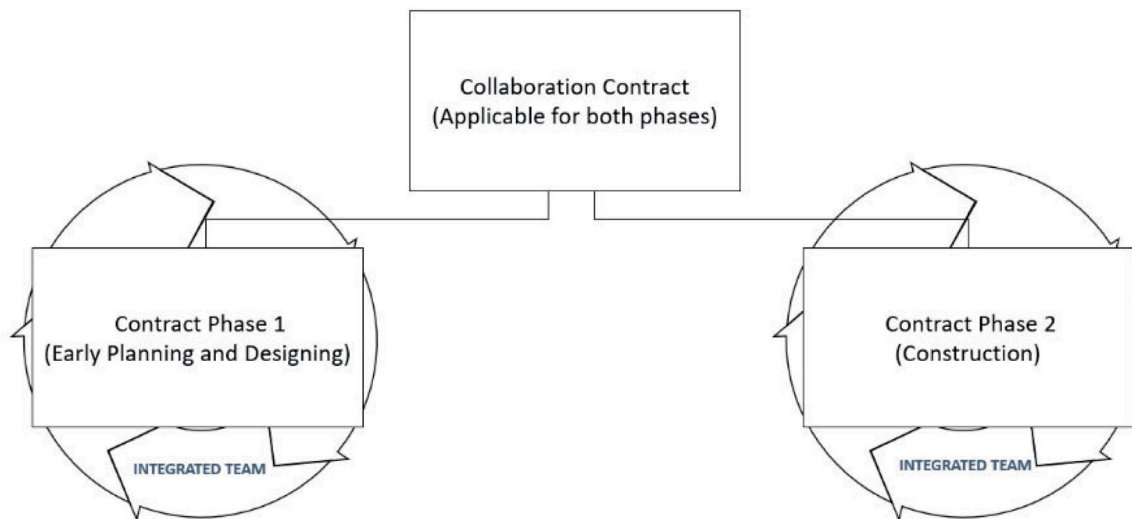
There remains a meaningful debate regarding how relational contracting strategies could reduce adversarial conflict in the construction industry (Rahman and Kumaraswamy 2004). The weaknesses of transactional contracting, arm's-length relationships and communication are a universal problem (Latham 1994). In response, relational contracting strategies have been applied with the idea of developing cooperative project client-supplier relationships (Gil 2009). From the viewpoint of relational contract theory, all contracts have a relational dimension, and the idea is that all economic transactions exist in a relational setting.

RC requires high levels of collaboration as typified by relational contracting strategies, and the type of strategy is often determined by the nature of the project, for example, hospitals (Ling *et al.* 2006). However, an alternative view is that RC strategies are established based on the duration, uncertainty and complexity of the project. Furthermore, RC strategies have been introduced as a way of addressing issues such as risk allocation, design coordination, decision making, and dispute resolution (El-adaway *et al.* 2017).

### **Characteristics of relational contracting strategies**

Strategies are used in projects to steer organisations and individuals that form the design and construction teams. Strategies and their differences are described in this section as a prelude to examining their influence on project outcomes.

The systematic literature review highlighted six main RC strategies (Table 3). As well as the difference in terminology (IPD, LPD PA, ECI, Partnering and PPP), there are different characteristics, depending on the contextual situation of each project and the state of evolution of the strategy<sup>4</sup>. First, Integrated Project Delivery (IPD) strategy has one contract containing



**Figure 4.** Deduced fully relational contracting model with integrated teams in both design and construction.

three or more parties, whereas traditional contracts contain only two parties (El-adaway *et al.* 2017). Studies show that IPD is used predominately in the USA and Europe. Second, Lean project delivery (LPD), primarily used in the US, is similar to IPD; however, LPD employs lean principles and tools for design management incorporated into the contracts (Mesa *et al.* 2019). Third, Project Alliance (PA) is widely employed in the Australian and Finnish public sector (Walker and Lloyd-Walker 2015) and involves a joint contract where all parties share risk in design and construction phases. Fourth, Project Partnering (PP) involves either a legally binding contract or a voluntary non-contractual agreement between partners (Hall *et al.* 2018, Tawalare and Laishram 2018). PP consists of two or more parties who work together to achieve specific business objectives (Eriksson 2010).

Public-Private Partnerships (PPP); are often described as agreements where a private partner designs, builds and finances an infrastructure which can be maintained, operated, leased or given back to the public partner (Edkins and Smyth 2006, Jagannathan 2017). They incorporate a degree of cooperation or relational elements and also maintenance performance (Yeung *et al.* 2012a, Lenferink *et al.* 2013).

However, Jobidon *et al.* (2018) and Lahdenperä (2012) are the exceptions who exclude PPP as relational contracts because the risk is often transferred to other parties and not to the owner, and that these are comprehensive long-term arrangements extending past the supplier's involvement. This type of confusion can also be seen in Early Contractor Involvement (ECI) literature where Lahdenperä's articles do not categorise ECI as RC (Lahdenperä 2016a, Lahdenperä 2016b);

while (Chen and Manley 2014) classify ECI as an RC model. ECI is a two-phase contracting procedure, to tender a contractor in early, who will work with the owner on detailing the design and then a separate tender occurs for the cost of the actual construction which can also help in determining the price of a project (Scheepbouwer and Humphries 2011). It encourages relationships by lowering risk, using cost as a financial reward in helping to appropriate costs in a project, thus helping to increase success (Chen and Manley 2014). ECI is recognised in this review as a relational contract as it increases the relation between parties. Other names identified in the literature, such as joint venture (JV) and Collaborative Procurement Models (CPM) were named in the literature but not predominately studied. Generally, RC strategies were mentioned in conjunction with handling highly complex projects where transactional models were deemed unfit.

### **Strategies and their differences**

A relational contracting strategy involves a conscious effort to make relational norms contractually binding, through "the written parts of contractual relations as constitutions establishing legislative and administrative processes for the relationship" (Jobidon *et al.* 2019, p. 20). however, each strategy is different.

The concepts presented here: full, hybrid and fragmented (Figures 4–6) are a recontextualisation (labels ascribed to groups of the literature) of all identified RC strategies. Assessing the differences in and between design and construction, is the level of analysis that helps to identify collaborative differences.



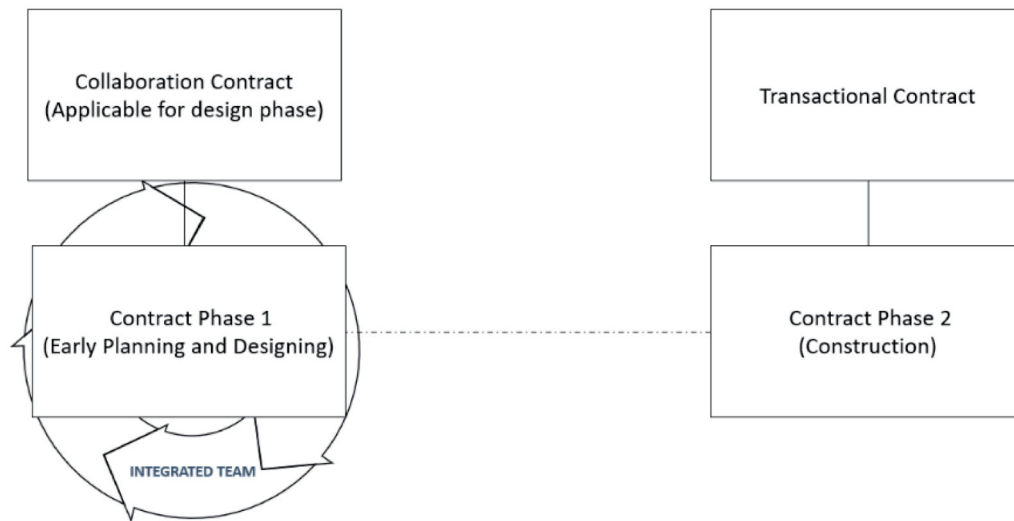


Figure 5. Deduced Hybrid relational contracting model with an integrated team in design.

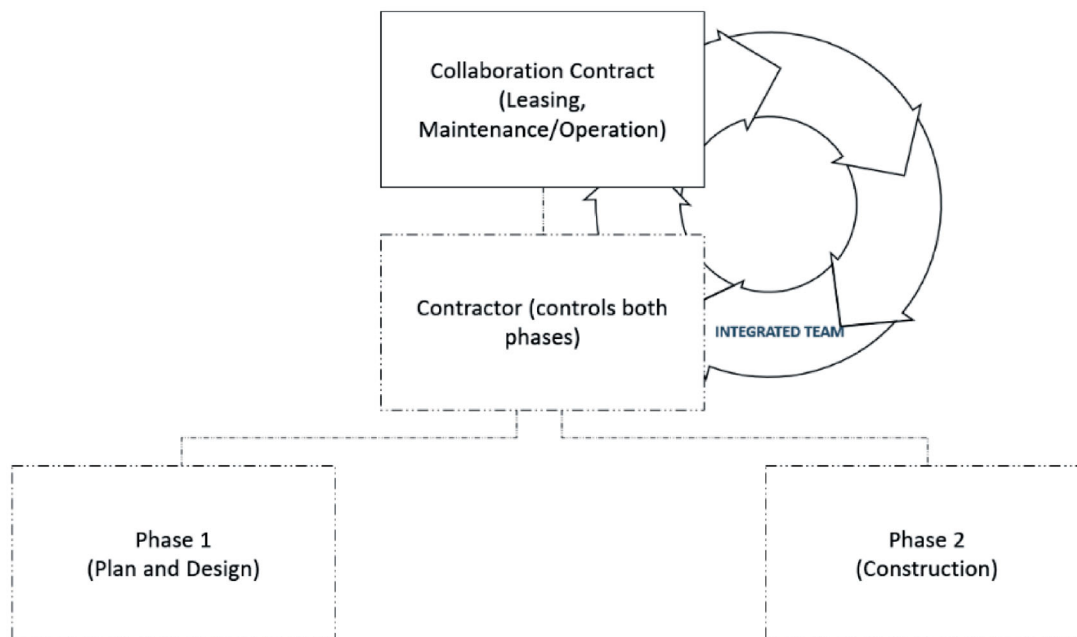


Figure 6. Deduced Fragmented relational contracting model with an integrated team outside design and construction.

The category “Fully relational contracting model” (Figure 4) offers an illustration of the management strategy applied in projects which attempts to fully integrate the organisations and individuals in design and construction teams. Examples include IPD, LPD, PA and PP.

Potential advantages from using this model include reducing the boundaries between design and construction, thus reducing separation and integration inadequacy, for example, incorporating construction personnel in the design stage increases understanding and prevents problems (Alarcón and Mardones 1998).

Early involvement is essential in bringing in knowledge ahead of time and working together towards a common goal; however, owners must have the capacity and capability to participate (Austin *et al.* 2016). The construction phase is often the hardest stage to achieve value because the cost of reversing changes is more difficult as the structure materialises over time (Ballard and Howell 2005). Other advantages include: collaborating in solving risks not identified, problem-solving together, adapting to the marketplace and group discussions on conflict resolution (Jobidon *et al.* 2018). The most significant value is generated when

**Table 4.** Definition of identified Project Management themes.

Themes	Definition
Project	Project referring to all benefits related to physical plans found in project management such as cost time and quality
Teams	Teams refer to the benefits found in teams
Governance strategy	Governance strategy refers to roles, responsibilities and decision making in a project
Early planning	Early planning concerns the early planning phase
Work environment	Work environment relates to the benefits found in the operational environment
Risk management	Risk management relates to the identifying, analysing and taking precautionary steps to reduce/curb risks
Issue management	Issue management looks at the identification and resolving of issues
Continuous improvement	Continuous improvement is about how value is achieved
Intercommunication	Intercommunication involves improvements to communication
Innovation	Innovation is related to innovativeness benefit in projects
Scope management	Scope management relates to the benefits of managing the scope

collaboration occurs in both design and construction. However, this is dependent on a coalesced team with shared goals, that adapts to change; one cannot exist without the other (Mesa *et al.* 2019).

Next is the “hybrid model” where a collaboration contract is used early in the design of a project, and then a transactional contract is mainly used for the construction phase see Figure 5.

However, if the same contractor is employed in the construction phase, then this increases relations. These models are often found under ECI strategies; see Chen and Manley (2014) discussion on combined two-stage arrangements to help set the price or to establish the design. It can be argued, that it provides possibilities to enhance value in the design phase because the downstream parties are brought upstream. However, transferring the value from design to the construction phase is hindered by the inflexibility of the contract, which often regulates the transaction. These contracts are considered partly relational because the handover between phases is dependent on the contract and the ability of the contractual parties to communicate changes.

Finally, a third model “fragmented” (Figure 6) exists, where collaboration is patchy in design and construction between the parties and where the long-term relationship occurs based on leasing, maintenance and or operation of the structure. These represent Private-Public Partnerships (PPP), Private Finance Initiative (PFI), Build Operate Transfer (BOT) and variations of these models (Edkins and Smyth 2006, Lenferink *et al.* 2013, Jagannathan 2017).

Extant literature shows that this strategy, which often moves away from ownership, allowing projects to get access to everything needed, without the burden of proprietorship, often offering support services (maintenance) for the duration of the lease. The advantages arise for the owner from lowered risk by someone else handling both design and construction; however, this is offset by the hidden costs due to financing of the build, lack of input and power to

make changes, in other words, you are at the mercy of others (Edkins and Smyth 2006). All these models are similar in that they create a project group whereby the contractor, owner, and parts of the supply chain collaborate.

Addressing the third research question, the relational contracting strategies (i.e. management strategies used in relational projects) are IPD, LPD PA, ECI, Partnering, and PPP. Originating from different contexts, there are substantive differences between strategies and the main focus on collaboration and integration. The unit of analysis is the design and construction interface because the collaborative differences between the strategies are observable. Collaboration is dictated by the “degree of relationalism” that exists based on various types of strategies that are available (Cheung *et al.* 2006, p. 51) and is vital for team integration and for breaking down barriers in a project as it increases the probability of successful project outcomes (Harper *et al.* 2016, p.1).

#### **Analysis IV: project strategies and outcomes of relational contracting**

Macneil’s norms are the expected and essential features to be found in contracts (Macneil 1973). The connection between project strategies and outcomes can be analysed using Macneil’s ten norms as a framework of the expected and essential features found in contracts (Macneil 1973). The benefits and disbenefits of RC were determined by identifying the outcomes of RC in projects found in the literature. A classification of themes was created based on grouping similar categories together deduced from a PM’s perspective using “a priori” from a “project management” perspective. Twelve classification themes were generated (Table 4).

The benefits and disbenefits of RC (Table 5) in project management highlight several predominant themes. First, “Intercommunication” and “Risk management” were the most mentioned themed benefits

while issues involving Teams were the most mentioned disbenefits of RC. Hence PMs need to understand that developing and managing relationships are essential in projects. Therefore, it is vital for PMs to have or develop excellent communication and management skills.

The results show that project benefits and disbenefits arise in many different ways. At the core of the benefits in projects is "Risk management" which is necessary for identifying and assessing the organisational environment because of their influence on both the project and the supply chain. These arise from the advantages of early planning, allowing the supply chain to make decisions that set the stage for the strategic framework for the project. While a fundamental disbenefit can be seen in the Governance Strategy as diverging governance between parties can lead to dysfunctional relationships and be used to help explain how people will work together.

While "Projects" was the second most mentioned themes for the benefits and disbenefits of RC, the scope and the Work Environment are equally important as flexibility in design and alignment of trust and common objectives between the parties influences planning and the work culture of the project.

Source literature registered benefits, from strategies: Integrated Project Delivery (IPD), Project Partnering (PP) and Project Alliancing (PA) projects. However, the disbenefits were found mostly in case studies of Integrated Project Delivery (IPD) projects.

However, research points to a lack of knowledge on the benefits in the relationship between governance and managerial competence and the effects of incentives on inter-communications in RC arrangements. Further research of the disbenefits has failed to explain the effect horizontal communication has in undermining the flow in relational projects (See Table 5). Surprisingly despite the nature of most RCs to deliver benefits, there are also many disbenefits and limited documented evidence on innovation, issue management, integration, and environmental themes which are also fruitful avenues for future research.

### **Comparison of the beneficial and non-beneficial effects**

The ten norms of relational contract theory are present in all contracts. The norms can be used in transactional or relational strategies, and various gradations exist along a spectrum (Table 1). The project outcomes derived from case studies (Table 5) assigned to themes are an informational source for discerning the

benefits and disbenefits of the norms (Table 6). The results showed that while the benefits can be seen in seven of the norms, the disbenefits show in nine of the norms.

The three norms, where no direct link was found in the beneficial outcome of relational projects, were role integrity, effectuation of consent and propriety of means. These three norms could not be seen in the benefits for several reasons.

First, the three norms tend to be unseen, playing their part in the project whether the contract is discrete or relational. Therefore, the part played by these three norms may not be obvious, and all three are interconnected concerning reaching agreement and using appropriate methods to achieve objectives. Second, the three norms are only noticeable if they fail in a project; for example, it would cause severe disruption if someone lacked commitment or did not carry out their role, thus undermining the project. If the project is eventually concluded without severe disruption or breakdown, then it can be assumed that these three norms played their part.

Nevertheless, one knows they exist, as Macneil states that all the norms are present in all relational projects (Macneil 1973). Therefore, when examining the disbenefits found in projects, the missing three norms not identified in the themed benefits become evident. When the obligations of a relational contract are met, all of these are reflected in the beneficial outcomes, and when the obligations are not met, these are reflected in the nonbeneficial outcomes in projects.

Comprehension of these norms equips PMs better in the analysis of issues and their resolution, implementing changes as required, since it gives better insight into cause and effect, resulting in benefits and disbenefits to the construction process, in performance and in client satisfaction.

The themed benefits and disbenefits show the specific areas of project management where they are noticeable. As PMs are often driven towards generating specified outputs (deliverables), the benefits and disbenefits identify the importance of knowledge about the dysfunctionalities in governance strategies as well as a good understanding of the unique aspects of a project culture to match the project.

The fourth sub-question addresses what part the norms play in relational project strategy outcomes (seen through their beneficial and non-beneficial effects) using Macneil's ten norms as a framework.

It can be seen that Macneil's ten norms are variably applied to relational strategies and can also be

**Table 5.** Benefits and disbenefits of relational contracting.

Identified themes	Benefits in each group	Dis-benefits in each group
Project	<p>Achievement of economic, financial objectives (Cost, quality, time)</p> <p>Achievement of common objectives/Commitment to project goals/Alignment of team objectives/ Sharing mutual objectives/Joint commitment</p> <p>Improved project efficiency/Maximise efficiency in all phases. Contributes to the success of a project/ Optimise success</p> <p>Cost-effectiveness/ Improved profit margins. Cost reduction</p> <p>Improved project outcomes/Better project performance</p> <p>Improvement of project quality</p> <p>Timeliness of completion</p>	<p>Unachievement of financial objectives (Cost, time)</p> <p>Decreased profit margins (IPD shared risk and reward), "the client ultimately bears and pays for the risk when a megaproject runs into trouble"</p> <p>Lack of time and resources (Joint decision-making and "More solutions studied than traditionally" entailed.)</p> <p>Cost increase (Late planning, new contracts, new methods)</p> <p>Late completion (learning environment, new contracts, new methods)</p>
Teams	<p>Sharing of tacit knowledge for current and future projects/Competitive/commercial advantage/Learning environment/ Recognises interests and develops an environment of care/ Best for project/ Value-based decision making</p> <p>Integrates people systems business structures and practices/ Promote integrated teams</p> <p>Effective team working</p> <p>Improved Individual benefits (Developed creative and competent employees)/ Harnesses/integrate talents and insights to optimise results/ Creation of project stakeholders willing to resolve construction challenges/ Employee involvement/ Maximising participants resources</p> <p>Greater interdependence/ Solve the problem of interdependence</p> <p>Increased satisfaction</p>	<p>Overload (learning environment, new contracts, new methods). The processes and conditions giving rise to new rules, understandings, and associated practices" for the early stages of a new project delivery model. "excessive amounts of meetings that lead to meeting exhaustion"</p> <p>Regression (Old habits), Competitive-Additional shortcomings included that self-interest exceeded interest in the project due to human nature</p> <p>Power changes (Main contractor – designers). The developer does not have the final word</p> <p>We already do it syndrome" Experienced team members (different contractual contexts) assume nonexistent knowledge and experience and might lead teams the wrong way and negatively affect project outcomes. The Uncommitted Member who received internal pressure from their company to revert to old habits. Subcontractors lack experience with open-book leading to lower cooperation.</p> <p>Time spent studying solutions not always led to optimal solutions.</p> <p>Contractors in particular as being focussed on profit-making and self-interested gains, as well as on the narrow temporal dimension (quarterly cycles) in their cognitive processes.</p>
Governance strategy	<p>Bilateral governance/ Solve governance problems/ Integrated project governance/ Parties govern the transaction</p> <p>A proactive and formalised approach</p>	<p>Dysfunctionalities in governance: PA- Subcontractors excluded from project decisions. "Cognitive locked in" and "relational inertia" Honouring obligations (Participants' expectations were too high due to publicity given to IPD)</p> <p>Difficult to pinpoint who is responsible (Horizontal communication-Joint decision-making)</p> <p>Strong ambiguity, when employees are not familiar in an alliance organisation "what to do" first and "who was in charge" kept arising.</p>
Early planning	<p>Early involvement of key participants/ Early contributions of knowledge and expertise</p> <p>Improved, encourages early planning/ Mutual future planning/ Intensified early planning</p>	
Work environment	<p>Development of an atmosphere conducive to innovation, trust and commitment</p> <p>Mutual trust/ Trust environment/ Establish trust</p> <p>No-blame culture /Building a RC culture</p>	<p>Disalignment of interests (subcontractors on traditional contracts),</p> <p>Hurry-up schedule, although more productive, deprives team-building activities that support the collaborative spirit</p> <p>Added greed, mistrust, cultural barriers, and lack of insurance coverage to the list of barriers of IPD adoption</p>
Risk management	<p>Risk reduction/ Sharing of benefits and burdens/ Mutual benefits, risk-sharing/ Proactively addresses risks/ Overcome risk and uncertainty/ Managing all risk jointly/ Risk sharing mechanisms</p>	<p>Overcompensate (Lack of more rigorous system integration testing). Concerns for all respondents about current IPD practices were insurance and risk allocation</p>
Issue management	<p>Effective problem resolution/ Make easier resolution claims and disputes are avoided</p>	<p>Disparity in contract management (Pre-Award vs awarding: (letter of intent then IPD). Trivial subcontractor issues wasted the time of the whole team;</p>

*(continued)*

**Table 5.** Continued.

Identified themes	Benefits in each group	Dis-benefits in each group
	Reduced litigation /Liability exposure	The internal roles of the project employees and potential conflict among the professional logics of different groups (failure to build, paradoxically, a temporary but sustainable hybrid organisation)
Continuous improvement	Generation of better value for client/ Generation of greater customer satisfaction/ Increased value Generation of better value for a project team Continuous improvement/ Embrace lean principles Encourages new ways to manage and execute design and construction	
Communication	Encourages collaboration/ Improved relationships/ Building relationships/ Team building/ Improves working relationship between various stakeholders/ Establish working relationships/ Enhance team collaboration/ Facilitates the partnering mechanism/ Unites a collaborative team Open and honest communication/ Promotes communication Development of relational tools (team goals, meetings and reviews) Encourage appropriate information technology like Building Information Modelling (BIM) for real-time sharing of information Better cooperation among stakeholders, project participants/ Promote cooperation Elimination of adversarial relationships/ Lubricate, remove any transactional frictions, barriers/ Reduce conflict of interest/ Less opportunistic contracting/Reduced transaction costs. Share resources.	Having too many individuals involved in decision making slowed the process and made it more complex,  Joint decision-making (Too small decisions had to be unanimously taken)
Innovation	Increased opportunity for innovation/ Encourages collaborative innovation/ Innovative	
Environment & safety	Sustainability/ Environmental performance. Reduce waste. Safety performance	
Scope management	Efficient change management/ Flexibility to respond jointly/flexible contracts/ Changes to the project	Discomfort among the design-build subcontractors due to uncertainty associated with the iterative designs needed for IPD

**Table 6.** Use of Macneil's norms as benefits in RC literature.

Macneil ten norms	Identified themed benefits	Identified themed disbenefits
(1) Role integrity	Not mentioned as a benefit	Teams, Issue management
(2) Reciprocity	Risk management	Teams
(3) Implementation of planning	Governance strategy	Governance strategy
(4) Effectuation of consent	Not mentioned as a benefit	Governance
(5) Flexibility	Scope management	Not mentioned as a disbenefit
(6) Contractual solidarity	Project	Teams
(7) Linking norms	Work Environment	Work Environment
(8) Creation and restraint of power	Intercommunication	Teams
(9) Propriety of means	Not mentioned as a benefit	Project
(10) Harmonisation with the social matrix	Intercommunication	Issue management

observed in project outcomes (seen through their beneficial and non-beneficial effects).

However, the relationship between the norms and beneficial and non-beneficial effects has not yet been clarified, so it is not obvious how the norms work individually or as a group in their impact. For example, if an individual or organisation has role integrity (i.e. intention to fulfil assigned role in project) but does not have propriety of means (i.e. the experience, skills and means to complete assigned tasks), then the two norms are unable to work together, and vice versa - if an individual or organisation has propriety of means

but not role integrity, then that might result in tasks being partially completed or not accomplished at all.

Understanding the mechanisms (not necessarily observable but unseen triggers of outcomes) from the norms individually and together can help understand a project's performance.

Likewise, how a project performs if certain norms are disregarded in a project (i.e. violation of any norm) might trigger a consequence, which, again depending on type and status of the norm, could weaken the single function and grouped function of the norms. In addition, norms can have several functions in

interorganisational arenas, typically enabling and or regulating the exchange.

Though ideally, the norms are expected to be self-evident in projects, the question of whether all the norms can actually be seen and the context in which they are examined in projects has to be addressed. The results also showed that there is a lack of studies that empirically (direct and indirect observation from experience) assess how well the norms used in contracts were exhibited in the outcomes of projects. The link between the norms and outcomes needs to be further examined since there is a gap in knowledge and there is a need to establish a direct link in connecting norms used in strategies and norms observed in outcomes to demonstrate the part played by individual norms along the path from strategy to outcome.

In relational contract theory, Macneil's norms are elements that need to be embedded as social norms in the relationship found in RC contracts (Yeung *et al.* 2012a); however, other influences may lessen the outcome, or indeed may lessen the impact of Macneil's norms. There is a lack of studies that discuss the influence of the procurement process on the norms in project outcomes.

For example, in procurement, competitive bidding can focus on price and typically seek explicit recognition of the transaction between the parties in the contract instead of the relationship (Colledge 2005). This behaviour (competitive tendering) can violate the norm of reciprocity by generating the risk of deficient trustworthiness and mutuality, fundamentally creating a dysfunction in the relationship.

These benefits and disbenefits also highlight gaps that are avenues for future research.

### **Discussion of results**

In terms of contributing to the advancement of relational contracting knowledge, these findings contribute to a more comprehensive strategy and outcome understanding compared to Ke *et al.* (2015a) informative work on mapping theory onto contract content. The value of Ke *et al.* (2015a) work was in conceiving the contract as a system of outcomes, while the results show that from an RC perspective, operationalisation of the norms can be seen in the outcomes dictated by the adopted strategies of projects.

Harper *et al.* (2016) supports these results by calling for a "systematic approach for measuring integration of a team throughout design and construction of a project" (p. 1). Operationalisation of norms through

outcomes has the potential to "illuminate the nature of relational contracting in construction project teams" (p. 1). The collaboration throughout design and construction is the key factor that plays an important role in distinguishing RC strategies and binds these two stages together.

Adding to this, the concept of relational contracting has highlighted the importance of collaboration in construction projects (Ling *et al.* 2013, Ling *et al.* 2015, Memon *et al.* 2015, Jelodar *et al.* 2016a). Collaboration affects both the design and construction phases in projects, and when communication and collaboration work well together, they are "vital components in team development" (Jelodar *et al.* 2016a, p. 1004). According to Harper *et al.* (2016). "team integration improves the probability of successful project outcomes" (p. 1).

The results also identify the norms in the outcome of projects. In relational contract theory, the norms perform an important role, "regarding the content of the relation, the formation of parties, obligations and the actual operation of the contracts" (Diathesopoulos 2010, p. 4).

The methods used in this review to identify Macneil's norms from the outcomes found in projects operationalised all of the norms, avoiding the method issues highlighted by Ivens and Blois (2004) in their assertions around the problems in the operationalisation of the ten norms in research.

The results also indicate that beneficial and non-beneficial effects can be identified in the use of Macneil's ten norms in the strategies and outcomes of relational projects. Additionally understanding the relationship between the norms and how they work together may be a useful indicator of project outcomes. Ivens and Blois (2004) argue that "while one of the relational norms is an intensification of "role integrity", and "contractual solidarity" is a significant contributor to the relational norm "preservation of the relation", "reciprocity" is only a minor contributor to this norm. On the other hand, the "discrete norm is the product of the intensification of two common contract norms: implementation of planning and effectuation of consent" and "contractual solidarity", "role integrity", and "reciprocity" make no contribution to it" (p. 256). In other words, norms have intensification, contributor and preservation mechanisms that can each intensify or contribute to the preservation of the relational exchange. Understanding the norms as individuals and as a group of interrelated norms in how they function is important in understanding their part played in preserving the exchange.

As a result, propositions arise for future research in order to investigate and capture the part played by the norms as mechanisms in construction projects. Hence, it is thus advocated an example proposition:

Proposition 1: Future RC research should be directed towards projects that use relational contracts and whether the interaction of the norms with each other generate more effective mechanisms than the individual mechanisms of the norms in isolation.

The results also showed that knowledge gaps emerge from the review findings. While there has been some limited research into the norms and their outcomes, see Jobidon *et al.* (2019) and Ke *et al.* (2015a), who examined the norms through the differences in contractual language, this research also points to the need for new research into assessing if the norms found in relational contracts correspond to the empirical experience in the outcomes of projects, forming the basis for empirically testing relational contracting strategies to measure the outcomes and suggest how relationship-based construction projects may succeed in applying the norms or may influence future management strategies in how to employ the norms in contracts.

Hence, it is thus advocated an example proposition:

Proposition 2: Future RC research should be directed towards assessing if the norms found empirically underlying the outcomes from relational projects correspond to the norms found in their contractual arrangements.

Macneil's norms in relational contract theory have influenced project management literature on the study of contracts. A relational contracting strategy is guided consciously to make relational norms contractually binding, through "the written parts of contractual relations as constitutions establishing legislative and administrative processes for the relationship" (Jobidon *et al.* 2019, p. 20). However, the results also indicate that other influences may lessen the outcome or indeed may lessen the impact of Macneil's norms. For example, procurement methods play an important role in the development of the relational contract, as the process of entering into a contract can shape the collaboration and the outcome of projects, especially the mindset of the parties before signing the contract and the collaborative environment.

Competitive procurement processes can focus on the transaction (e.g. price) instead of the relational competencies required from parties. In reality, this behaviour (competitive tendering) can violate the norms of "reciprocity" by generating the risk of deficient trustworthiness and mutuality by fundamentally

creating a dysfunction in the relationship. Macneil (1999) points out that "every transaction is embedded in complex relations" (p.884), thus emphasising the importance of social interaction. By investigating the approach behind the relational contracting formation, it is possible to differentiate the differences between the "degree of relationalism" between different RC models. Hence it is therefore recommended:

Proposition 3: Future RC research should empirically examine how parties (within the procurement process) approach to the relational contracting formation impacts the contract and the "degree of relationalism" between the parties.

This viewpoint would be beneficial across different sectors and countries and could draw out guidance on the importance of the relational contracting process on the relationship. This will aid decisions makers not only in the judicial systems, but practitioners and scholars could use it to explain the concept of the relational contract.

Consequently, this highlights many under-researched areas that might have been omitted.

## Conclusion, implications and contributions

This article commenced by remarking on the importance of understanding relational contracting in the construction industry; however, there are many essential gaps in the literature.

While the existence of defining relational contracts has been recognised in English legal cases, and court judgements have emphasised the "good faith" element, this paper makes an attempt at revealing an objective description of RC, which is only a building block, for finding a consensus on an RC definition. In addition, the legal viewpoint needs to coalesce with the sociological and economic viewpoints and also the nuances of meaning understood by the various disciplines employing relational contracts (construction, etc). It is an arena for further research to discover the essential, comprehensive meaning of "relational contracting".

An analysis of RC models resulted in a conclusion that they can be divided into three broad categories based on RC collaboration differences and highlighting the problems in the handover between the design and construction phases.

Finally, the norms are revealed within the strategies and outcomes of projects, and the benefits and disbenefits are evident in all projects however they are highlighted either when participants fulfil the

obligations of a relational contract, or when the project culture diverges from the governance strategy.

This proposed research will help integrate practitioners and scholars with judicial, sociological and economic perspectives on RC. While the findings illustrate the popularity of RC, further research should focus on documenting the benefits from incentives, innovation, issue management, integration and environmental effects. Useful future research could also focus on connecting contracts, norms and project outcomes, to identify the mechanisms at work.

Despite this unique approach (using a systematic review to reveal the connection between norms, strategies and outcomes), there are still some limitations. First the systematic review procedures such as rigour, database selection and filtering processes limit the research and by using a narrow search also increases the chances of missing essential studies for instance, organisational, governance, and management articles. Therefore, expanding the search criteria and using multiple databases may have a significant effect on the results and findings.

Second, the result from using a unique method of including theoretical and analytical frameworks together with objectification through lexical phrases in a systematic review is a multiple methods approach to studying a phenomenon and plays an important role in the development of the field of research in the academic community. While obtaining results from different methods potentially enriches our understanding, the findings affect the larger context of scholarship on the topic. For example, future research can be derived from public and private construction actors, in particular, the management field in general.

Third, the research approach focussed on relational contracting, could be scaled up to include a comparison of relational contracts, PBC, and the influence of incentives in contracts. By doing so, different relational performance-based evaluation models could be generated for the infrastructure sector and relationship-based construction projects for international comparisons.

This paper makes a number of practical and theoretical contributions which are of value to various groups of practitioners and scholars in the construction industry. This research has three main implications for the management of construction projects. First, an explanation of the RC strategies available and the categorical differences associated with each strategy can aid as a guide such that it eliminates the necessity for extensive adaptations in the strategic approach in projects. Arguably the identified themes assist PMs in understanding, recognising and

developing relational contracts. Second, an objectively defined definition of relational contracting can act as a starting point in contemplating RC options at the initial phases of a project but can also aid the judicious assessment of the legal concept of a relational contract. Third, this research has the potential to improve the effectiveness of relational projects. A thorough understanding and comprehension of Macneil's norms offer value through quality assurance and performance measurement of relational projects. Comparisons between Macneil's RC norms and the "benefits from the norms" found in projects would greatly aid this endeavour. To this end, Macneil's norms can be used as a practical tool in assessing RC performance.

In addition, this research has two main contributions to research; first the review of the concept - relational contracting in the construction industry - gives a theoretically informed, comprehensive and systematic review, which seeks to consolidate extant literature in the domain and offers future research directions. The second contribution lies in confirming the previous theoretical work of Macneil through the manifestation of the norms within RC literature and highlighting its importance in the validation of relational projects, in other words, contributing through mapping practice back to theory.

## Notes

1. Macneil argues that transactional contracting focuses on the transaction whereas relational contracting focuses on the relationships within the contract, on opposing ends of a spectrum. See Macneil, 1973 for further details.
2. Lean construction industry held a summit in 2004 to address the problems of transactional and traditional contracting (see Hall and Scott, 2019; Lichtig, 2005) and Latham and Egan reports in 1994 and 1998 criticising traditional methods for causing excessive waste in the construction industry (see Latham, 1994, Egan, 1998).
3. See future interactions stemming from the Channel Tunnel (1980s–1990s), to Heathrow T5, to London Olympics, to Heathrow T2, to Thames Tideway, to Crossrail.
4. See Ke, Y.J., Gajendran, T. & Davis, P.R.

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