

---

# Re-thinking Governance for Megaproject Collaboration: A Stewardship Theory

## Perspective

---

### Abstract

As megaprojects continue to play a pivotal role in societal and economic development, an exploration of megaproject delivery structure, its challenges and governance model in a collaborative work environment is needed. Megaprojects, characterized by their scale, complexity and transformative potential, have become pivotal components of modern development initiatives. However, managing and governing these colossal endeavors, particularly within an inter-organisational and multi-disciplinary structure, presents unique challenges. In response to these challenges, this paper adopts stewardship theory as an alternative perspective to the previous research on megaproject governance. Stewardship theory, in contrast to the traditional agency theory, emphasizes ethical leadership and the intrinsic motivation of stakeholders. It postulates that individuals, particularly leaders, can act as responsible stewards who prioritize the long-term welfare of the organisation and its stakeholders. Hence, this paper calls for a re-consideration of megaproject governance by embracing stewardship theory that could offer a promising avenue to address the unique challenges posed by inter-organisational collaboration in megaproject governance.

*Keywords: Megaprojects; Megaproject Collaboration; Project Governance; Stewardship Theory; Agency Theory*

---

---

## 1. Introduction

Megaprojects are “large-scale, complex ventures that typically cost a billion US\$ or more, take many years to develop and build, involve multiple public and private stakeholders, are transformational, and impact millions of people” (Flyvbjerg, 2017, p3). Megaprojects are typically characterized by large size, long duration, high uncertainty, ambiguity, and complexity, cultural diversity, a dynamic governance structure, large-scale policy making, and significant political and other external influences (Greiman 2013; Klakegg et al. 2008; Merrow 2011; Muller and Hobbs 2005). They demand meticulous planning, rigorous management, and unwavering leadership. The recent emergence of multi-disciplinary sectors of megaprojects including areas in transportation, energy, climate change, medical research, education, water supply, innovation and scientific projects, roads, bridges, tunnels, dams and high-speed rail, effective megaproject practice is required to address complexities that exceed the technical concerns of engineering (Clegg et al. 2017; van Marrewijk et al. 2016). These projects often span multiple years, cross various geographical regions, and demand immense financial investments.

At the same time, there has been an increasing trend in the research of megaproject management and performance for a better understanding of “what goes on in megaprojects – how they are managed and organized, from within, by the managers who are tasked with bringing them to fruition” (Söderlund et al. 2017). Most of the existing research is concerned with understanding

---

why megaprojects fail so frequently and seek to identify some of the dimensions that make megaprojects so difficult to manage, including their size (Flyvbjerg, Bruzelius, et al., 2003; Flyvbjerg, 2017; Merrow, 2011; Morris and Hough, 1987), uncertainty (Lenfle and Loch, 2010; Miller and Lessard, 2000), complexity (Brady and Davies, 2014; Davies and Mackenzie, 2014), urgency (Morris and Hough, 1987; Shenhar and Dvir, 2007), and institutional structure (Scott et al., 2011). A common thread across this body of research is that megaprojects present unique challenges that can only be effectively addressed through collaborative efforts that bring together expertise, resources, and innovation to successfully tackle the colossal challenges of megaprojects delivery.

Megaprojects are generally led by a client team, prime contractor, or some form of temporary collaboration such as alliance, joint venture, or partnering or consortium of multiple parties (owners, sponsors, clients, contractors, suppliers, and other stakeholders) that work jointly on a shared activity for a limited period of time in an uncertain environment (Jones and Lichtenstein, 2008; Merrow, 2011). The purpose of this activity is to coordinate and integrate the efforts of numerous subgroups and suppliers involved in project activities (Davies and Mackenzie, 2014; Davies et al., 2009). However, these alternative structures tend to be primarily understood and implemented from an agency theory perspective introduced in the work of Jensen and Meckling (1976), which are characterised by control, monitoring, individualistic identity-driven behaviour, and self-interest. The prevailing assumption in most

---

studies on governance is shareholder-oriented corporate governance, as evidenced by the prevalence of agency theory in project governance research (Muller, 2011).

One alternative that has gained momentum in recent years is stewardship theory (Donaldson and Davis, 1991) in governance. Stewardship theory proposes a different set of principles and incentives compared to agency theory (Jensen and Meckling, 1976). While agency theory assumes that individuals primarily act out of self-interest and require external controls to align their actions with organisational goals, stewardship theory asserts that individuals, particularly in a collaborative structure can act as responsible stewards who prioritize the long-term welfare of the organisation and its stakeholders. This shift from an agency-centric perspective to a stewardship-centric one carries the potential to significantly enhance governance theory and practices by enabling better collaboration. By focusing on the ethical and moral dimensions of leadership and the intrinsic motivation of stakeholders, stewardship theory offers an alternative path to success in megaproject collaboration. This paper discusses the merits of embracing stewardship theory in megaproject governance, making propositions on how it can contribute to more effective and responsible collaborative practices.

In the remainder, this paper first reviews the academic literature on megaproject collaborative delivery approaches including their characteristics, limitations, and challenges. Then the theoretical background of megaproject governance theories is discussed with an insight into the project and corporate governance and then focuses on the comparison between agency theory

---

and stewardship theory in terms of their ability to support collaborative delivery in megaprojects. This illustrates the viability of stewardship theory in devising effective megaproject governance in practice when compared with the agency theory. Finally, the paper discusses the implications of a stewardship-theoretical approach towards megaproject governance for future research and practice.

## **2. Collaborative delivery approaches for megaprojects**

### **2.1 Types and benefits of collaborative delivery approaches**

Megaprojects are a complex system of systems used as the delivery model for different industries including transportation, energy, water supply (Flyvbjerg and Stewart, 2012; Davies and Mackenzie, 2014), the Football World Cup or major defence programmes (National Audit Office [NAO], 2004). Established as a temporary organisation, megaprojects can be led by a client team, prime contractor, or some form of collaborative project delivery models (Lahdenpera,2009) such as project partnering (Bresnen, 2007; Bygballe and Swärd, 2019), consortium (Grimsey and Lewis, 2004), project alliancing (Guo et al., 2014; Walker and Lloyd-Walker,2015), integrated project delivery (Cohen, 2010; National Association of State Facilities, 2010), or special purpose vehicle (Grimsey and Lewis, 2004; Davies and Mackenzie, 2014) or joint venture (Grimsey and Lewis, 2004; Hobday, 2000) or coalition of multiple parties (owners, sponsors, clients, contractors, suppliers, and other stakeholders) that work jointly on a shared activity for a limited period in an uncertain environment (Jones and Lichtenstein, 2008;

---

Merrow, 2011). The term ‘collaboration’ refers to “a process in which autonomous or semiautonomous actors interact through formal and informal negotiation, jointly creating rules and structures governing their relationships and ways to act or decide on the issues that brought them together; it is a process involving shared norms and mutually beneficial interactions.” (Thomson et al., 2009). However, some the clarification about collaborative delivery of megaprojects is needed.

In today’s competitive business environment related with to megaprojects, there is a growing demand by the clients of the megaprojects for involving multiple organisations to operate in collaborative project delivery approaches and an inter-organisational setup which can be in the form of “consortium” or “project alliancing” or project partnering” or “integrated project delivery” or “joint venture” or “special purpose vehicle”. Each differs in its structure, purpose, and the degree of collaboration involved. Also, the terms of such collaboration are often used loosely or interchangeably by practitioners, and this leads to confusion over the definition of the terms in practice. Fortunately, the business context invariably makes the meaning clear. Nevertheless, it may be useful to propose some operational definitions for these terms as described in Table 1.1 below, collaborative project delivery approaches used by the entities towards the delivery of a megaproject.

<b>Collaborative project delivery approaches</b>	<b>Characteristics</b>	<b>Key references</b>
<b>Consortium /Consortia</b>	a formal collaboration between multiple independent organisations or entities (individually referred as “member” or collectively as “members” of the consortium). These entities maintain their legal and organisational independence and are often formed for a specific project, program, or initiative, combine resources, and strive towards a common goal.	Grimsey and Lewis, 2004; Davies and Mackenzie, 2014.
<b>Project Alliancing</b>	is a multiparty contracting arrangement between two or more entities who undertake the work cooperatively on a shared risk and reward basis to achieve agreed outcomes based on principles of good faith and trust, an open-book approach	Davis and Love, 2011; Love et al., 2011; Jefferies et al., 2014; Lloyd-Walker et al., 2014; Walker and Lloyd-Walker, 2015; Guo et al., 2014.

<b>Collaborative project delivery approaches</b>	<b>Characteristics</b>	<b>Key references</b>
<b>Project Partnering</b>	is (a single project application of) a management approach used by two or more organisations to achieve specific business objectives. and based on mutual objectives, an agreed method of problem resolution, and an active search for continuous improvements	Sakal (2005); Zheng et al., 2008; Eriksson (2010); CII (1991); Cowan et al., 1992
<b>Integrated Delivery Partners</b>	is a project delivery method distinguished by a contractual agreement between a minimum of the owner, design professional, and builder, where risk and reward are shared, and stakeholder success is dependent on project success	Shenhar and Dvir, 2007; Denicol, 2020; Davies and Mackenzie, 2014, Cohen, 2010; National Association of State Facilities, 2010



<b>Collaborative project delivery approaches</b>	<b>Characteristics</b>	<b>Key references</b>
<b>Joint Ventures</b>	is characterised by several firms collaborating on a project or several distinct projects to share the profits net of interest, each firm being paid based on its agreed contribution in kind or financial terms.	Grimsey and Lewis, 2004; Davies and Mackenzie, 2014;
<b>Special Purpose Vehicles</b>	is a formal accounting and contractual arrangement set up by one or more firms to undertake a project or a series of projects separate from the accounts of the firms comprising the SPV. Thus, not all SPVs are consortia. However, consortia invariably set up SPVs after being selected to carry out specific work and the members of the consortium become the shareholders of the SPV.	Hobday, Mike. 2000; Ruuska, et al., 2011; Grimsey and Lewis. 2004;

**Table 1.1: Types of megaprojects collaborative project delivery approaches**

The collaborative structure formed to achieve common goals is not always given the attention

---

it deserves in academic research. While the lack of an extensive literature review on collaborative project delivery approaches may be notable, it should not overshadow that collaboration plays an indispensable role in the success of megaprojects and their ability to bring together diverse expertise, optimize resource allocation, share risks, foster innovation and promote international collaboration is unparalleled.

As megaprojects are capital-intensive endeavours, they often exceed the financial capacity of a single entity or organisation. Through the collaboration, financial resources are combined, reducing the burden on individual participants or members and spreading the financial risk. This shared investment approach ensures that megaprojects have access to the necessary funds throughout their lifecycle, promoting stability and sustainability. In megaprojects, unforeseen challenges are commonplace, ranging from regulatory hurdles to unexpected geological obstacles. Collaborating organisations can distribute these risks (Miller and Lessard ,2007; Cavusgil and Deligonul ,2011) more evenly, mitigating potential setbacks, therefore, facilitating the sharing of risks (Zwikael and Smyrk, 2015). By doing so, they increase the project's resilience and improve its chances of timely completion. When experts from various fields collaborate, new and ground-breaking solutions can emerge. These innovative approaches (Li and Hambrick, 2005) can lead to cost savings, enhanced sustainability, and improved project outcomes (Sharma ,2012). The collaborative approach is increasingly common due to its ability to mitigate risks, enhance innovation, and optimize project outcomes. Collaboration creates an

---

environment where creativity and ingenuity flourish, driving progress (Turner, 2009) in megaprojects.

The selection of a collaborative approach depends on the objectives of multiple parties or organisation involved in a megaproject (owners, sponsors, clients, contractors, suppliers, and other stakeholders).

## **2.2 Challenges for collaborative delivery approaches**

Megaproject teams tend to rely on tried-and-true procedures since contractual constraints, strict timetables, and budgets are frequently prioritised over higher-risk innovation strategies (Sergeeva and Zanello 2018). It is becoming increasingly difficult for organisations to envision, plan, and carry out projects that are complex in terms of structure, uncertainty, dynamics, pace, and socio-political context (Baccarini, 1996; Geraldi et al., 2011; Padakar and Gopinath, 2016).

When businesses behave in their own best interests to maximise their financial return at the expense of weaker parties, this is known as opportunistic behaviour (Williamson, 1985).

Megaproject sponsors have gradually shifted away from traditional, adversarial forms of contracting and towards collaborative approaches that foster cooperation to counter this problem. Such behaviour can take many different forms, such as failing to fulfil obligations, withholding pertinent information, or not bargaining/negotiating in good faith (often relying upon information asymmetries). Because these contractual arrangements allow parties to "share the gain and share the pain," there has been a growing reliance on non-traditional contracting

methods to deliver megaprojects, such as consortiums, alliances, relational contracts, or public-private partnerships (Bygballe et al., 2010; Lahdenpera, 2009).

Although collaborative inter-organisational teams have to deal with a variety of issues, including disparate organisational cultures, a rise in heterogeneous ideas, technical jargon, and working styles, the differentiation of power and outcome distribution, and increased perceived personal differences, certain limitations and challenges as summarised in table 1.2, associated within such collaboration must be addressed towards the selection of governance approach.

<b>Collaborative Behavior</b>	<b>Limitation and Challenges</b>	<b>Key references</b>
<b>Trust and Alignment</b>	Building trust and aligning interests among multiple stakeholders in mega projects can be challenging. Diverse organisations and individuals may have different priorities, objectives, and perspectives. Establishing a shared vision and fostering trust among project participants is essential but can take time and effort	Zwikael and Smyrk, 2015; Ibrahim, Costello, and Wilkinson ,2013
<b>Coordination</b>	Mega projects often involve a large number of	Ibrahim, Costello, and

<b>Collaborative Behavior</b>	<b>Limitation and Challenges</b>	<b>Key references</b>
<b>and Communication</b>	participants, including various organisations, teams, and individuals. Coordinating and communicating effectively across these diverse entities can be complex. Miscommunication, information gaps, and coordination delays may hinder collaborative efforts and decision-making	Wilkinson 2013; Winch and Leiringer, 2016
<b>Power Dynamics</b>	In collaborative environments, power dynamics can influence decision-making and resource allocation. Differing levels of influence, control, and authority among project stakeholders can create challenges in achieving a fair and balanced collaboration. Resolving conflicts and managing power asymmetry requires effective governance mechanisms	Davis et al., 1997; Hofstede, 1998
<b>Complexity and Scale</b>	Mega projects are characterized by their complexity, scale, and interdependencies.	Capka, 2004. Frick, 2008; Qiu et al. 2019;

<b>Collaborative Behavior</b>	<b>Limitation and Challenges</b>	<b>Key references</b>
	Collaborative efforts must account for the intricate nature of such projects, including the integration of multiple systems, interfaces, and stakeholders. Coordinating diverse activities, managing interfaces, and ensuring compatibility can be demanding in large-scale collaborations	Pitsis et al., 2018; van Marrewijk et al., 2008; Brunet 2019,
<b>Organisational Cultures and Structures</b>	Organisations participating in mega projects may have different organisational cultures, structures, and processes. Aligning these diverse cultures and adapting to new ways of working can pose challenges. Differences in decision-making styles, risk tolerance, and project management approaches may require significant effort to overcome	Qiu et al. 2019; Drach-Zahavy, 2011; Gelfand et al.,2007; Hofstede, 1998; Davies et al., 2009; Davies and Mackenzie, 2014; Denicol, 2020a; Suprpto et al., 2015
<b>Resource Sharing and</b>	Collaborative behavior involves sharing resources, knowledge, and risks among project	Rahman and Kumaraswamy, 2002;

<b>Collaborative Behavior</b>	<b>Limitation and Challenges</b>	<b>Key references</b>
<b>Risk Management</b>	<p>participants. Allocating resources equitably, managing dependencies, and aligning risk management approaches can be complex. Discrepancies in resource contributions and risk appetite may lead to tensions and conflicts</p>	<p>Zwikael and Smyrk, 2015;van Marrewijk et al., 2008.</p>
<b>Contractual and Legal Frameworks</b>	<p>Mega projects require well-defined contractual and legal frameworks to govern collaboration. Negotiating and managing complex agreements, including intellectual property rights, liability sharing, and contract terms, can be intricate. Ensuring clarity, fairness, and enforceability of contracts is crucial for sustaining collaboration</p>	<p>Davies et al.,2006; Flyvbjerg, 2017, Walker et al., 2002; Ross, 2006, Sergeeva and Zanello 2018.</p>
<b>Change Management</b>	<p>Due to significant changes in processes, systems, and organisational structures in megaprojects. Managing change and overcoming resistance to change among stakeholders can be a considerable</p>	<p>Capka, 2004, Shenhar, 2001, Flyvbjerg et al., 2003; Miller and Hobbs, 2005, Ruuska</p>

Collaborative Behavior	Limitation and Challenges	Key references
	challenge. Collaborative behavior requires adaptability and a shared willingness to embrace change for project success	et al., 2011, Barnes and Wearne 1993, De Bruin et al. 2014,

**Table 1.2: Limitations and challenges of collaborative behavior**

Understanding the limitations and challenges of the collaborative behaviour will serve as a catalyst for stakeholders to reconsider their approach to megaproject governance. Also, as part of governance structures the above limitations and challenges requires proactive management strategies, effective communication channels, shared commitment to collaboration, open and transparent communication, regular stakeholder engagement, and continuous monitoring and evaluation that can help mitigate these limitations and enhance collaborative behaviour.

### **3.Theoretical perspectives on governance**

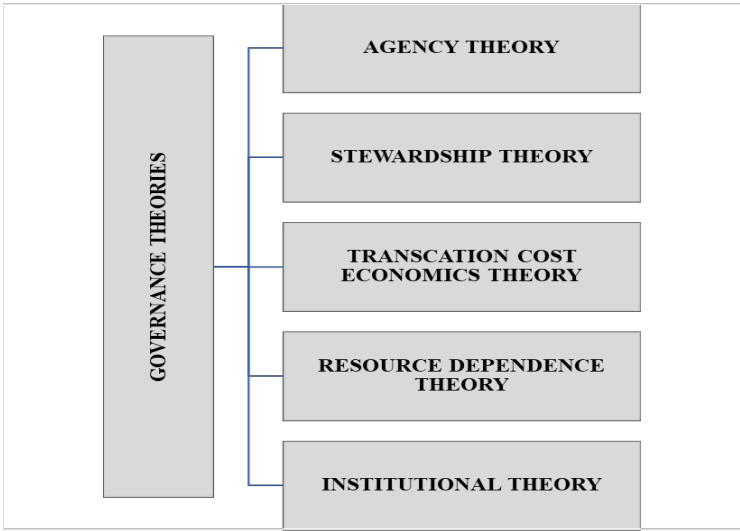
#### **3.1 Introduction**

The governance of megaprojects is a complex and multifaceted area that requires effective frameworks and models to guide decision-making, stakeholder management, and overall project success. The field of megaproject governance research is expanding quickly, and various theoretical stances must be taken into account. Project governance is covered in several



---

studies (Biesenthal and Wilden, 2014; Turner et al., 2010) as part of the corporate governance theories that are depicted in Fig. 1.1 below. Therefore, to provide a basic explanation of these theories, an overview of governance theories, is discussed in this section.



**Fig 1.1: Types of Governance Theories**

Yusoff and Alhaji (2012) state that one of the well-known theories being researched concerning corporate governance is agency theory. It was first introduced in the work of Jensen and Meckling (1976). While stressing the principal-agency theory, other researchers, such as Zwikael and Smyrk (2015), highlighted the theoretical lenses through which project governance is viewed utilising the theories of stakeholders, stewardship, institutions, and resource reliance. The premise that shareholder-oriented corporate governance is the foundation of most governance studies is demonstrated by the acceptance of agency theory (Jensen and Meckling, 1976) and transaction costs economics (Williamson, 1979) in project governance research

---

(Muller, 2011). Studies with an underlying stakeholder-oriented viewpoint on governance, are uncommon, as demonstrated by stewardship theory (Davis et al., 1997).

In contrast to agency-type relationships, which are characterised by control, monitoring, individualistic identity-driven behaviour, and self-interest, stewardship relationships are about mutual trust and unity among the partners and are characterised by collective identity, autonomy, and empowerment (Toivonen and Toivonen, 2014). The trade interactions between the principal and the agents are one of the governing mechanisms, according to the principal-agency theory (Bredillet, Tywoniak, and Dwivedula, 2015). In other governance models, performance monitoring, and contracting to include relational (bilateral/trilateral) viewpoints and collaboration amongst partner organisations in pooling resources, skills, and expertise to achieve a shared objective can all be included.

Resource dependency theory and institutional theory are both concerned with the relationship between an organisation and a set of actors in the environment. According to both ideas, organisations are preoccupied with gaining approval and legitimacy from external stakeholders, and their decisions are influenced by a variety of external factors. When combined, the two theories have more predictive power (Sherer and Lee 2002). According to institutional theory, an organisation adopts behaviours that are deemed appropriate and valid in its field of expertise (Scott 1995). Thus, both theories explain how organisations deal with demands from the marketplace and how they could rely on or be affected by other actors.

---

The institutional theory asserts that organisations incline to mimic the behavioural norms of other actors in the organisation field, while the resource dependency theory contends that the need for resources is linked to dependence on other actors. The resource dependency theory also presupposes that the organisation actively chooses how to accomplish goals. Resource scarcity, which leads to several organisations vying for the same or similar sets of limited resources, is a fundamental principle of resource dependency theory. Organisations function inside a social framework of norms, values, and presumptions about what behaviour is proper, according to institutional theory (Oliver 1997; Scott 1995).

Another well-known theoretical viewpoint in project governance is the Transaction Cost Economics ("TCE") theory (Ahola et al., 2014). Every economic trade has a cost, or a "transaction cost," according to the TCE theory, and organisations take steps to reduce these costs (Williamson 1979). This theory and agency theory are similar in that they both aim to limit self-interest and opportunism through governance structures (Kochhar 1996). On the other hand, agency theory emphasises on the principal-agent connection, while TCE theory emphasises individual transactions.

The studies indicate that the firm's governance approach is explained by the theories of shareholders and stakeholders, while the behaviour of the individuals inside these governance structures is explained by the theories of agency and stewardship.

### **3.2 Corporate governance and project governance**

---

As per Klakegg et al. (2009), it is imperative that governance extends to every tier of the organisation, commencing with corporate governance that extends from the board level to the execution-task management level and culminating in project-level governance. Although project governance is typically based on and integrated with corporate governance, the key focus is on the governance of individual projects. The number of project decision layers will reduce if the project governance structure is kept apart from the corporate governance structure since the project decision path won't be intertwined with the organisational chain of command. The Project Management Institute defines project governance as “an oversight function that is aligned with the organisation's governance model and that encompasses the project lifecycle (and provides) a consistent method of controlling the project and ensuring its success by defining and documenting and communicating reliable, repeatable project practices” (PMI, 2013b). Project governance is also defined by Muller (2009) as "the use of systems, structures of authority, and processes to allocate resources and coordinate or control activity in a project." It coexists within the corporate governance framework to support projects in achieving their organisational objectives (Pinto, 2014).

However, the literature on project governance is not mature. Ahola et al. (2014) concluded their literature assessment on project governance with a lack of agreement on the definition of project governance. There is often a lack of agreement on a single definition of project governance, according to updates of the literature conducted more recently by ul Musawir et al. (2017) and

---

Simard et al. (2018). This further leads to a lack of consensus regarding the components of a successful project governance system.

Various scholars have created distinct models to elucidate the concept of project governance. Early project governance research (Turner and Keegan, 1999) concentrated on identifying various organisational structures based on the size of the project and the number of customers in an organisation. It then identified the roles in governance, which were referred to as the broker and steward model (Turner and Keegan, 2001). Biesenthal and Wilden (2014) further broadened the scope and created a conceptual multi-level project governance framework by utilising various governance theories -resource dependency theory at the portfolio level, stewardship theory at the organisational level, agency theory, and transaction cost economics at the project level. Moreover, by referencing theories other than corporate governance theories, other scholars expand on the pertinent study in project governance. In the context of inter-firm initiatives like megaprojects, some scholars investigate project governance systems (Adami and Verschoore, 2018; Shenhar and Holzmann, 2017). While some studies see project governance as a multi-level phenomenon and emphasise the creation of a multi-level project governance framework, others concentrate on building project governance mechanisms to manage the interaction between governors and project managers.

Other scholars (Joslin and Muller, 2016; Nguyen et al., 2018) focus on project governance within individual firms. At this stage, numerous project governance models are created using

---

diverse viewpoints and theoretical underpinnings. Too and Weaver (2014) tried to design a multi-level project governance structure based on the corporate governance, project/programme management, and portfolio management literature. Their research proposes four key project governance mechanisms: portfolio management, project sponsorship, project management office, and projects and programme support. The first mechanism, portfolio management, is mainly used for the selection or termination of projects while the latter three mechanisms aim to deliver the selected projects successfully. A large number of project governance studies created frameworks specifically for their industry or type of project (Miller and Hobbs, 2005; Pryke, 2005).

Assuming project governance is not fully regulated by corporate governance, Muller et al. (2016) explored the interaction of project governance and corporate governance and its impact on ethical issues in temporary organisations by using institutional theory and agency theory. They found that corporate governance mechanisms substitute project governance mechanisms (control and trust mechanisms) in reducing ethical issues. This is because corporate governance sets the overall framework with which project governance mechanisms should synchronise. Furthermore, ul Musawir et al. (2017) acknowledged the limitations of corporate governance theories in project governance and discovered that no theory could adequately account for the intricate relationship that exists between projects and the organisation.

---

Project governance contributes to better project performance by facilitating the alignment of project output with organisational strategy.

#### **4. Agency and stewardship theories for governance**

To offer references for possible deeper study in understanding and improving collaborative project delivery approaches and megaproject governance practices, it is critical to review and analyse the characteristics of the agency and stewardship theory in the context of the objectives of this paper. Stewardship theory and agency theory are two prominent perspectives in corporate governance, each offering distinct views on the relationship between principals (shareholders) and agents (managers). Agency theory is a practical way to depict the interaction between a company's manager and shareholders by seeing them as self-interested and logical actors. Although several corporate governance practises have been developed and put into place per agency theory, it has been discovered that this has not greatly enhanced the performance of the organisation. According to an empirical study by Joslin and Muller (2016), there is a substantial association between project success and the governance style of steward doctrine, however absolute adherence to agency theory does not always increase the success rate of projects. The two extreme views on agency theory, according to Jensen and Ruback (1983), who claimed that it is a revolutionary theory, while Perrow (1986), claimed that agency theory is unclear, narrow, and has no testable implications were evaluated by Eisenhardt (1989). The study found that the principal-agent problems in any firm can be solved by using this distinct,

---

understandable, and empirically testable theory. Agency theory has considerable potential for enhancing the understanding of project governance (Ahola et al., 2014; Biesenthal and Wilden, 2014; Zwikael and Smyrk, 2015).

According to agency theory, people are either opportunistic or individualistic, with the former emphasising the pursuit of self-interest maximisation and the latter showing a propensity to pursue their interests at the detriment of others. The two categories of agency theory are moral hazard models and adverse, selection models. Before the contract being written, information asymmetry between the principal and the agent is addressed by adverse selection and information asymmetry afterward is addressed by moral hazards. Nonetheless, there are still a lot of boundary constraints in agency theory, and more theoretical work is required (Bendickson, Muldoon, Liguori, and Davis, 2016). According to this definition, the foundation of agency theory is the concept of ownership and control separation, which is a crucial issue in organisations (Jensen and Meckling, 1976). The board cannot fully rely on the organisation's management due to the division of ownership and control. As a result, disputes could arise between owners and their agents, which might lead to agency fees being incurred to resolve the disputes. Neo-classical economics criticises agency theory because an agent can operate in his or her own best interest rather than the principal's or owner's (Donaldson and Davis, 1991). The management could not be trustworthy, which is another reason to challenge the theory. As a



---

result, the main goal of agency theory is that project owners must strictly supervise the project manager's performance (Aduda, Chogii, and Peterson, 2013).

For the first time in the project governance literature, Turner and Muller (2003) employed agency theory in their study to explain the interaction between the principal (the project owner) and the project manager (the agent). The researchers concluded that the owner of the project must keep an eye on the agent's performance. As a result, the project owner can guarantee that the goals of a project manager coincide with those of the owner. Turner et al. (2010) argue that in the context of project management, agency theory is used to highlight the relationship between the project owner and the project manager. Given the role of project governance as explained by Turner (2009), it helps to set the project objectives and then determine the means to attain these objectives and to monitor the performance, as this appears well informed by agency theory.

According to Davis et al. (1997), "Additional theory is needed to explain relationships based on other non-economic assumptions," agency theory can only explain a portion of the complexity of an organisation due to its economic perspective. This is accomplished by stewardship theory, which presupposes a stakeholder perspective in governance. In contrast to agency-type relationships, which are characterised by control, monitoring, individualistic identity-driven behaviour, and self-interest, stewardship relationships are about mutual trust

---

and unity among the partners and are characterised by collective identity, autonomy, and empowerment (Toivonen and Toivonen, 2014).

Stewardship theory “defines situations in which managers are not motivated by individual goals, but rather are stewards whose motives are aligned with the objectives of their principals” and was developed as a management alternative to agency theory (Davis et al.,1997). The stewardship theory assumes that long-term contractual relations are developed based on trust, reputation, collective goals, and involvement where alignment is an outcome that results from relational reciprocity. Many publications in the literature posed the two theories as opposites and overlooked that in response to various stimuli, individuals can alter their behaviours from more stewardship relationships to agency relationships, or vice versa (Toivonen and Toivonen, 2014). Stewards are motivated by intrinsic rewards, such as trust, reputational enhancement, reciprocity, discretion and autonomy, level of responsibility, job satisfaction, stability and tenure, and mission alignment.

According to agency theory, a principal selects an agent based on the agent's experience and cost. The principal may determine that the resources or knowledge needed to produce a good or service are not available within their organisation and that it would be more expensive to hire or develop the necessary expertise internally than to contract for it. The terms of the agreement, which include the inputs, procedures, results, quality and satisfaction parameters, requirements for monitoring and performance reporting, how the agent will be paid for

---

performing the principal's work, and the consequences if the principal discovers that the agent is prioritising his or her objectives over the principal's, are agreed upon by the principal and the agent. Despite being widely used by scholars and offering insightful information about governance, agency theory has been criticised for being too general over time.

Stewardship theory on the other hand looks at interactions and actions that are frequently disregarded in theories of organisational economics. It emphasises contractual, collective, pro-organisational behaviour where goal convergence is valued more highly than agent self-interest.

Fundamentally, stewardship theory relies significantly on the principal's and steward's initial trust disposition. A steward places greater value on cooperation, even when his/her goals are not perfectly aligned with the principal, over defection, and other expressions of self-serving behavior. This is because of the steward's perception "that the utility gained from (contractually aligned) behavior is higher than the utility that can be gained through individualistic, self-serving behaviors" at the expense of the principal's goals (Davis et al., 1997). The characteristics and differences between agency theory and stewardship theory are summed up in Table 1.3 below.

<b>Characteristics</b>	<b>Agency Theory</b>	<b>Stewardship Theory</b>
<b>Theoretical Basis</b>	Economics	Organisational psychology/sociology

<b>Characteristics</b>	<b>Agency Theory</b>	<b>Stewardship Theory</b>
<b>Performance criterion</b>	Shareholder Value	Stakeholder Value
<b>Principal- Agent relationship</b>	Goal Conflict	Goal Alignment
<b>Agent motivation</b>	Extrinsic	Intrinsic
<b>Approach</b>	Distrust, Avoidance	Trust, Acceptance, collaboration
<b>Cultural differences</b>	High Power distance	Low Power Distance
<b>Organisation Identification</b>	Low Level	High Level
<b>Behaviour</b>	Individualist	Collectivist
<b>Orientation</b>	Control oriented	Involvement oriented
<b>Governance</b>	Monitoring and incentives	Empowering structures

**Table 1.3: Characteristics of Agency and Stewardship Theory**

*(Source adapted from Davis et al., 1997)*

---

While agency theory ties more directly to the lower levels of Maslow's (1970) hierarchy of requirements, Davis et al. (1997) connects the psychological foundations of stewardship theory to the upper levels. The psychology of stewardship behaviour is explained in more recent study by emphasising that people must take responsibility for their own actions and the meaning that results from them. In this instance, Hernandez (2012) states that a "stewardship governance approach facilitates a sense of psychological ownership rather than material ownership" of the advantages gained from the behaviour and for the organisation.

In conclusion, while the agency theory has potential conflicts of interest and the need for monitoring, stewardship theory emphasizes trust, shared goals, and intrinsic motivation.

### **5. Towards a stewardship theory perspective in megaproject governance**

Megaprojects centred on collaboration have been more and more popular in recent years, but their success depends on everyone actively aligning their values, interests, and behavioural standards (Aapaoja et al., 2013). The complex organisational challenges, the relationship between the multiple parties to the project are key parameters for the delivery of the megaprojects in consideration to the technical challenges they possess that are often unexplored.

Collaboration project delivery approaches can range from loose cooperation to more integrated efforts as discussed in the earlier section. Each organisation in the collaboration differs in culture, project management process, communication, and conflict thus leading to challenges in the delivery of megaprojects successfully. According to Davies et al, 2006; Flyvbjerg, 2017,

---

a wide range of capabilities is critical to create and maintaining complex systems in megaprojects including governance.

Research on the governance of megaprojects is fragmented by many different views taken on by the institutions that design, set up, and maintain governance structures for groups of projects.

Bakker et al. (2016) have expressed the need to address the temporality of megaprojects, as the governance of megaprojects involves a plethora of types of institutional complexity (Biesenthal et al., 2018) political, regulatory, evolutionary, cultural, relational and social (Qiu et al. 2019), causes and remedies for subpar performance (Denicol et al., 2020), which are managed through polycentric and decentralized systems (Gil and Pinto 2018). While other researchers (Denicol et al., 2021; Derakhshan et al., 2020) address the lack of attention given to governance structures of organisational designs of large complex projects, Roehrich et al.(2020) highlighted the complexity of governing inter-organisational relationships. The research on project governance has made significant progress recently (Muller, 2017; Williams and Samset, 2012) because of the interaction of the governance structures established by each of those organisations in an inter-organisational collaboration taking into account their company as the focal firm.

Scholars and practitioners have called for research on the dynamic dimensions of governance, including the processes and actors involved at multiple levels Bakker et al., 2016; Söderlund and Sydow, 2019), in response to the focus in the literature over the last ten years on the

---

organisational structures and relationships involved in project governance rather than on governing practices (Brunet, 2019; Pitsis et al., 2014). Through their scholarly contributions, Garland (2009) and Pinto (2014) have both affirmed that project governance is seen as a crucial success component in project execution, ultimately contributing to the project's success. Therefore, to effectively manage the massive undertakings that arise from megaprojects, it is imperative to re-examine traditional forms of governance and investigate new paradigms that might be more appropriate given the complex collaborative project delivery approaches for megaprojects.

Project governance literature has largely emphasized the issues inherent in principal-agent relationships and has been strongly influenced by agency theory (Turner and Muller, 2003). To explore the beneficial behaviours of top managers that agency theory fails to address and to shed light on an additional interaction between principal and agent, stewardship theory was proposed as an enhancement and perfecter of agency theory (Chrisman, 2019). Numerous scholars argue that stewardship theory provides a more realistic and effective framework for governance. Donaldson and Davis (1991) highlight the psychological and social factors that drive stewardship behavior, emphasizing the intrinsic motivation of managers to act in the best interest of the firm. This stands in contrast to agency theory's focus on monitoring and control mechanisms, which may lead to a more rigid and contentious relationship.

However, in response to this pessimistic view of individual characteristics, summarised in

---

above Table 1.3, and motivations based solely on utility considerations, stewardship theory has emerged and disseminated to create a self-actualization prophecy for collaboration structure in megaprojects. While a lot of stewardship research has promoted its superior explanatory power over agency theory (Donaldson and Davis, 1991), much of the work using both theories has also often focused on the examination and reconciliation of its obvious incongruences with agency theory (Arthurs and Busenitz, 2003; Le Breton-Miller and Miller, 2009). Stewardship theory perspective presents a different model of man, grounded in psychology and sociology, who, rather than deriving utility in self-interested behaviors, derives greater utility in pro-organisational and collectivistic behaviors (Davis et al., 1997).

Research by Donaldson and Davis (1991) supports stewardship theory by demonstrating that organisations with a stewardship-oriented culture exhibit better long-term performance. Stewardship theory also contends that people, especially in collaborative structures, can act as responsible stewards who prioritise the long-term welfare of the organisation and its stakeholders. While agency theory has its merits, particularly in emphasizing the need for monitoring mechanisms, stewardship theory's focus on building trust and collaboration is increasingly recognized as crucial for effective project governance.

Based on the studies by the scholars (Turner and Muller, 2003; Muller, 2011; Biesenthal and Wilden, 2014; Bendickson et al., 2016; Hernandez, 2012), it is evident that shareholder and stakeholder theory explain the governance approach of the firm, whereas agency theory and



---

stewardship theory explain the respective behavior of individuals within these governance structures. Shareholder-oriented governance assumes that the corporation exists to maximize profits and thereby the wealth of its owners, the shareholders (Friedman,1970). Jensen and Meckling (1976) identified some of the problems that arise between managers and owners in shareholder-oriented governance and described it in their agency theory, which assumes individuals to be self-centered and utility-maximizing.

The tenet of stakeholder-oriented governance is that a wide range of parties are involved, such as suppliers, employees, consumers, shareholders, and the local community. According to this view, a corporation is a system of stakeholders that are involved to varying degrees (Biesenthal and Wilden, 2014). But it views the corporation as a constellation of disparate, even competing, interests because it considers that various stakeholders have diverse values and interests (Donaldson and Preston, 1995). Stewardship theory is becoming more and more popular due to the large number of stakeholders and the growing significance of a corporation's social duty (Aras and Crowther, 2012). Previous research has used either agency theory or stewardship theory to analyze principal-agent relationships in an organisational context. In such context, stewardship theory is not regarded as a separate theory that competes with agency theory but view it as a complement.

Currently, stewardship behaviour has been discussed only to a limited and less formal extent in project literature. Several authors perceive agency theory and stewardship theory as the

---

opposite endpoints of a swinging pendulum, where any state between pure agency and stewardship behavior can be achieved (Clarke, 2004; Hernandez, 2012), depending on whether the organisational members define themselves as individualistic, relational, or collectivistic (from agency to stewardship, respectively) (Hernandez, 2012). Many publications in the literature posed the two theories as polar opposites and overlooked that in response to various stimuli individuals can alter their behaviours from more stewardship relationships to agency relationships, or vice versa (Toivonen and Toivonen, 2014). The stewardship theory is that long-term contractual relations are developed based on trust, reputation, collective goals, and involvement where alignment is an outcome that results from relational reciprocity is summarised in following propositions:

- **Proposition 1 (Alignment with long-term orientation).** Megaprojects typically have long durations, complex structures, and high stakes. Stewardship theory emphasizes the long-term perspective and advocates for leaders who focus on the sustainable success of the project beyond short-term gains. Collaborative organisations in mega projects need to adopt a stewardship mindset to ensure the project's viability, effectiveness, and long-term benefits for stakeholders.
- **Proposition 2 (Fostering trust and accountability):** In megaprojects, collaborative organisations often have significant decision-making authority and control over project resources. Stewardship theory posits that trust is a fundamental element in relationships

---

between leaders, team members, and stakeholders to act responsibly, transparently, and ethically in managing project resources. This trust enhances cooperation, collaboration and effective governance in a collaborative project delivery approach.

- **Proposition 3(Balancing stakeholder interests):** Megaprojects involve multiple stakeholders with diverse interests, such as government agencies, investors, contractors, and the local community. Stewardship theory recognizes the need for leaders to consider and balance these interests, ensuring equitable outcomes for all stakeholders. The collaborative organisation needs to act as stewards who prioritize the collective welfare of stakeholders and facilitate effective stakeholder engagement and management.
- **Proposition 4(Ethical decision-making):** Megaprojects often face complex ethical dilemmas, such as environmental impacts, community displacement, or resource allocation. Applying stewardship theory encourages collaborative organisation to make decisions that align with ethical principles, ensuring responsible project governance and minimizing negative impacts.
- **Proposition 5(Focus on value creation):** Collaborative organisation needs to adopt a broader perspective and actively seek opportunities to generate value for stakeholders by considering social, economic, and environmental aspects throughout the project lifecycle. Stewardship theory emphasizes the creation of value for stakeholders, not just financial returns.

- 
- **Proposition 6(Long-term relationship building):** In megaprojects, collaborative organisation needs to establish strong relationships with diverse stakeholders, such as government bodies, local communities, suppliers, and subcontractors. Stewardship theory leans towards cultivating trust, collaboration, and shared objectives among stakeholders, leading to more effective governance and project success.

These propositions collectively provide a framework for understanding how stewardship behavior can contribute to effective and sustainable project management, encouraging project leaders and stakeholders to act as responsible stewards for the benefit of the organization and its projects.

## **5.Conclusion**

### **5.1 Implications**

As megaprojects continue to shape our world, the importance of competent collaboration cannot be overstated. Collaboration creates an environment where creativity and ingenuity flourish, driving progress in megaprojects. This paper draws attention to the importance of collaboration project delivery models and their structure in detail towards the delivery of megaprojects. The notion that collaboration project delivery is increasingly common due to its ability to mitigate risks, enhance innovation, and optimize project outcomes is well recognized in the existing literature. Turner and Muller (2005) also have emphasized the importance of collaboration and

---

coordination among project participants, through which they can align individual tasks to better address and manage the risk areas and produce a better outcome for all stakeholders. Effective collaboration not only ensures megaproject delivery but also provides a positive legacy that enhances the reputation of all organisations in collaboration.

The paper then identifies the challenges in the collaborative delivery approaches adopting a holistic approach and studying their limitations and challenges of collaborative behaviour.

Recognising this significance, it can be contended that future research on collaboration project delivery approaches can enrich the understanding of the stakeholders in mitigating such limitations and challenges in collaboration and thereby improving the megaproject performance.

Extensive governance systems can provide a degree of confidence in situations featuring high uncertainty and can assist in building a sense of interdependence to problem resolution, especially where they feature in a collaboration towards the megaproject delivery. Standardised ways to project governance have also been suggested by Muller et al. (2017) for the project's and the organization's project-based component's effective completion. It is simple to secure attempts to align project outcomes with a general plan by utilising project governance more strategically (Hjelmbrekke et al. 2017), but it offers several important implications to research.

There is a compelling narrative about a need to re-evaluate governing structures and theories within such a collaborative framework of megaprojects.

Research in project management gains from theoretical pluralism (Söderlund, 2011; Turner et

---

al., 2010). Studies that incorporate a stakeholder-oriented viewpoint on governance, as demonstrated by stewardship theory, are uncommon (Davis et al., 1997). This paper aligns with the current calls from academics (Joslin and Muller, 2016) to expand upon the stewardship theory and stakeholder theory for the development and implementation of project governance structures and represents only a modest first step in this direction by applying a new perspective and propositions towards embracing the stewardship theory for addressing the unique challenges presented by megaproject collaborative governance.

This paper further uncovers the current focus of the agency-centric approach in project governance and opens up the discussion on the merits and rationale towards the application of stewardship theory for collaborative project delivery megaproject governance.

There is an interplay of the governance structures created by each of those collaborative organisations, considering their company as the focal firm. Whereas the principal in a principal-agent relationship invests in coercive and compliance. By applying stewardship theory to megaproject governance, researchers and practitioners will gain a framework that addresses the unique challenges and expectations associated with megaproject governance. The application of stewardship theory to megaproject governance signifies a paradigm change in favour of a more cooperative and win-win strategy. The benefits of stewardship theory, which are based on its emphasis on shared values, intrinsic motivation and a pro-organisational.

Thus, stewardship theory can provide an alternate route to success in megaproject collaboration

---

---

by improving the governance practices from an agency-centric to a stewardship-centric perspective in addition to emphasising the moral and ethical aspects of leadership and the intrinsic motivation of stakeholders. In addition to the above, it will serve as a platform for stakeholders to reconsider their governance strategies and make way for a new era of responsible, effective, and ethically grounded management of these colossal undertakings.

## **5.2 Limitations**

The limits of the current exploratory review of stewardship theory stem mostly from its dependence on pre-existing literature. It might not provide an in-depth analysis of current events, thereby missing new viewpoints or criticisms. The quality and availability of sources limit the scope, which may result in bias. Furthermore, the exploratory character could lead to a subjective interpretation of findings, impacting the depth of analysis. As a retrospective approach, it may not capture real time dynamics or industry-specific nuances. Thus, while valuable for initial insights, this exploratory review's limitations underscore the need for additional empirical research to provide a more nuanced understanding of stewardship theory.

## **5.3 Future research**

While the above limitations have not impacted the primary outcome of the current study, future work also prompts several new research directions. One is the empirical validation of the impact of stewardship theory in the collaboration delivery approaches toward megaproject governance.

Another promising topic is studying the governance challenges in the collaboration delivery

---

approaches between various dimensions and possible synergistic effects. Future research could also address the leadership roles within the collaborative organisation with the contextual characteristics specific to the governance in megaprojects both theoretically and empirically. It is evident that these suggestions are not and (cannot be) exhaustive for such a broad emerging research stream for collaboration governance in megaprojects. Further contributions from both project management scholars are needed to explore this intricate topic.

The propositions discussed earlier could offer a promising avenue to explore the merits of stewardship theory further to address the unique challenges posed by inter-organizational collaboration in megaproject governance. The literature review on the propositions is not examined or is only partly covered in the existing literature and thus needs to be tested empirically. Therefore, it is of paramount importance to further explore the viability of stewardship theory towards megaproject governance in a collaborative project delivery approach.

## **5. Conflict of interest statement**

The authors declare that the manuscript has not been submitted or published elsewhere. There are no other potential conflicts of interest regarding this submission.



---

## References

1. Aapaoja, A., Herrala, M., Pekuri, A. and Haapasalo, H. (2013), “The characteristics of and cornerstones for creating integrated teams”, *International Journal of Managing Projects in Business*, Vol. 6 No. 4, pp. 695-713.
2. Adami, V.S. and Verschoore, J.R. (2018), “Implications of network relations for the governance of complex projects”, *Project Management Journal*, Vol. 49 No. 2, pp. 71-88, available at: <https://doi.org/10.1177/875697281804900205>.
3. Aduda, J., Chogii, R., and Peterson, O. M. (2013). An empirical test of competing corporate governance theories on the performance of firms listed at the Nairobi Securities Exchange. *European Scientific Journal*, 9(13), 107–137.
4. Ahola, T., Ruuska, I., Artto, K. and Kujala, J. (2014), “What is project governance and what are its origins?”, *International Journal of Project Management*, Vol. 32 No. 8, pp. 1321-1332, available at: <https://doi.org/10.1016/j.ijproman.2013.09.005>
5. Aras, G. and Crowther, D. (2012), "Editorial", *Social Responsibility Journal*, Vol. 8 No. 3. <https://doi-org.libproxy.ucl.ac.uk/10.1108/srj.2012.36808caa.001>
6. Arthurs, J.D., Busenitz, L.W., 2003. The boundaries and limitations of agency theory and stewardship theory in the venture capitalist/entrepreneur relationship. *Enterp. Theory Pract.* 28 (2), 145–162.
7. Baccarini, D. (1996). The concept of project complexity – A review. *International Journal*

- 
- of Project Management, 14, 201–204.
8. Bakker, R. M., DeFillippi, R. J., Schwab, A., and Sydow, J. (2016). Temporary organizing: Promises, processes, problems. *Organisation Studies*, 37(12), 1703–1719.
  9. Barnes, N. M. L., and Wearne, S. H. (1993). The future for major project management. *International Journal of Project Management*, 11(3), 135–142.
  10. Bendickson, J., Muldoon, J., Liguori, E., and Davis, P. E. (2016). Agency theory: The times, they are a-changin'. *Management Decision*, 54(1), 174–193. doi:10.1108/md-02-2015-0058.
  11. Biesenthal, C., and Wilden, R. (2014). Multi-level project governance: Trends and opportunities. *International Journal of Project Management*, 32(8), 1291–1308. doi:10.1016/j.ijproman.2014.06.005.
  12. Biesenthal, C., Clegg, S., Mahalingam, A., and Sankaran, S. (2018). Applying institutional theories to managing megaprojects. *Int. J. Project Management*, 36 (1), 43–54.
  13. Brady, T., and Davies, A. (2014). Managing structural and dynamic complexity: A tale of two projects. *Project Management Journal*, 45 (4), 21–38.
  14. Bredillet, Tywoniak, and Dwivedula, 2015; What is a good project manager? An Aristotelian perspective, *International journal of project management*, 2015, Vol.33 (2), p.254-266
  15. Bresnen, M. (2007), “Deconstructing partnering in project-based organisation: seven

- 
- pillars, seven paradoxes and seven deadly sins”, *International Journal of Project Management*, Vol. 25 No. 4, pp. 365-374.
16. Brunet, M. (2019). "Governance-as-practice for major public infrastructure projects: A case of multilevel project governing. *Int. J. Project Management*, 37 (2), 283–297.
17. Bygballe, L.E., Jahre, M., and Swärd, A. (2010). Partnering relationships in construction: A literature review. *Journal of Purchasing and Supply Management* 16 (4): 239–253.
18. Capka, J. R., (2004). Megaprojects – They are a different breed. *Public Roads Magazine*, 68, <http://www.fhwa.dot.gov/publications/publicroads/04jul/01.cfm>(accessed on 24.05.11).
19. Cavusgil, S. T., and Deligonul, S. (2011). Exogenous risk analysis in global supplier networks: Conceptualization and field research findings. *Information Knowledge Systems Management*, 10, 1–19.
20. Chrisman, J. (2019), “Stewardship theory: realism, relevance, and family firm governance”, *Entrepreneurship: Theory and Practice*, Vol. 43 No. 6, pp. 1051-1066, doi: 10.1177/1042258719838472.
21. Clarke, T., 2004. *The Stakeholder Corporation: A Business Philosophy for the Information Age. Theories of Corporate Governance: The Philosophical Foundations of Corporate Governance*. Routledge, London, UK, pp. 189–202.
22. Clegg, S., Shankar, S., Biesenthal, C., and Pollack, J. (2017). Power and Sensemaking in Megaprojects. In: *The Oxford Handbook of Megaproject Management* (ed. B. Flyvbjerg),
-

- 
- 238–258. Oxford, UK: Oxford University Press.
23. Cohen, J. (2010) *Integrated Project Delivery: Case Studies*, AIA National, AIA California Council, AGC California and McGraw-Hill.
24. Construction Industry Institute (CII!).(1991). “In search of partnering excellence.” Special Publication No. 17-1, Rep., Partnering Task Force of CII, Austin, Tex
25. Cowan, C., Gray, C., and Larson, E.(1992). “Project partnering.” *Project Manage. J.*, 22~4!, 5–12.
26. Davies, A. and Mackenzie, I. (2014), “Project complexity and systems integration: constructing the London 2012 Olympics and Paralympics games”, *International Journal of Project Management*, Vol. 32 No. 5, pp. 773-790.
27. Davies, A., Brady, T., and Hobday, M. (2006). “Organizing for solutions: Systems seller vs systems integrator”, *Industrial Marketing Management*, 36(2), 183-193.
28. Davies, A., Gann, D., and Douglas, T (2009). Innovation in megaprojects: systems integration at Heathrow Terminal 5. *California Management Review*, 51 (2), 101–125.
29. Davis, J. H., Schoorman, F. D., and Donaldson, L. (1997). Toward a stewardship theory of management. *Academy of Management Review*, 22(1), 20–47. doi:10.5465/amr.1997.9707180258
30. Davis, P., and Love, P. (2011). Alliance contracting adding value through relationship development. *Engineering, Construction and Architectural Management*, 18 (5), 444–461.
-

- 
31. De Bruin, K., Goosen, H., van Ierland, E. C., and Groeneveld, R. A.(2014). Costs and benefits of adapting spatial planning to climatechange: Lessons learned from a large-scaleurban development project in the Netherlands. *Regional Environmental Change*.
32. Denicol, J., Davies, A., and Krystallis, I. (2020). What Are the Causes and Cures of Poor Megaproject Performance? A Systematic Literature Review and Research Agenda. *Project Management Journal*, 51 (3), 328–345. 10.1177/8756972819896113 .
33. Denicol, Davies, and Pryke 2021: The Organisational Architecture of Megaprojects.” *International Journal of Project Management* 39 (4): 339–350. doi:10.1016/j.ijproman.2021.02. 002
34. Derakhshan, Roya, Gabriela Fernandes, and Mauro Mancini. 2020:“Evolution of Governance in a Collaborative University–Industry Program.” *Project Management Journal* 51 (5): 489–504. doi:10.1177/ 8756972820911245 design. In: Lorsch, J.W., Lawrence, P.R. (Eds.), *Studies in Organisation Design*. Irwin-Dorsey, Homewood IL, pp. 113–139
35. Donaldson, L., and Davis, J. H. (1991). Stewardship theory or agency theory: CEO governance and shareholder returns. *Australian Journal of Management*, 16(1), 49–64. doi:10.1177/031289629101600103
36. Donaldson, T. and L. Preston: 1995, ‘The Stakeholder Theory of the Corporation: Concepts, Evidence, and Implications’, *Academy of Management Review* 1(20), 65–91.
-

---

doi:10.2307/258887.

37. Drach-Zahavy, A. (2011), “Interorganisational teams as boundary spanners: the role of team diversity, boundedness, and extrateam links”, *European Journal of Work and Organisational Psychology*, Vol. 20 No. 1, pp. 89-118.
38. Eisenhardt, K. M. (1989). *Agency Theory: An Assessment and Review*. *The Academy of Management Review*, 14(1), 57– 74. doi:10.2307/258191.
39. Eriksson, P. (2010) Partnering: what is it, when should it be used, and how should it be implemented? *Construction Management and Economics*, 28(9), 905–17.
40. Flyvbjerg, B., 2017. Introduction: the iron law of megaproject management. *Oxford Handbook of Megaprojects*. Oxford University Press, UK, pp. 1–18.
41. Flyvbjerg, B., and Stewart, A. (2012). *Olympic Proportions: Cost and Cost Overrun at the Olympics 1960-2012* (p. 23). Saïd Business School, University of Oxford. Working PaperJune. 10.2139/ssrn.2238053 .
42. Flyvbjerg, B., Bruzelius, N., and Rothengatter, W. (2003). *Megaprojects and risk: An anatomy of ambition*. Cambridge: Cambridge University Press.
43. Freeman, R.E., 1984. *Strategic management: A stakeholder approach*. Pittman,
44. Frick, K. T. (2008). *The cost of the technological sublime: Daring ingenuity and the new San Francisco–Oakland Bay Bridge*. In H. Priemus, B. Flyvbjerg, and B. v. Wee (Eds.), *Decision-making on mega-projects: Cost–benefit analysis, planning and innovation* (pp.

- 
- 239–262). Cheltenham, UK: Edward Elgar Publishing.
45. Friedman, M. (1970, September 13). The social responsibility of businesses is to increase its profits. The New York Times Magazine. Retrieved from <http://www.colorado.edu/studentgroups/libertarians/issues/friedman-soc-resp-business.html> on October 9, 2013
46. Garland, Ross. 2009. Project Governance: A Practical Guide to Effective Project Decision Making. London: Kogan Page Publishers.
47. Gelfand, M.J., Erez, M. and Aycan, Z. (2007), “Cross-cultural organisational behavior”, The Annual Review of Psychology, Vol. 58, pp. 479-514.
48. Gil, N. and Pinto, J.K., 2018. Polycentric organizing and performance: a contingency model and evidence from megaproject planning in the UK. *Research policy*, 47, 717–734.
49. Greiman, V.A. (2013). *Megaproject Management: Lessons on Risk and Project Management from the Big Dig*. Hoboken, NJ: John Wiley and Sons, Inc.
50. Grimsey, Darrin and Mervyn K Lewis(2004). *Public Private Partnerships: the Worldwide Revolution in Infrastructure Provision and Project Finance*. Cheltenham: Elgar publishing ,2004. Web.
51. Hernandez Morela (2012). Toward an understanding of the psychology of stewardship ,The Academy of Management review, 2012, Vol.37 (2), p.172-193
52. Hjelmbrekke, Hallgrim, Ole Jonny Klakegg, and Jardar Lohne. 2017. *Governing value*

- 
- creation in construction project: A new model. *International Journal of Managing Projects in Business* 10: 60–83.
53. Hobday, M. (2000). “The project-based organisation: An ideal form for management of complex products and systems?”, *Research Policy*, 29(7/8), 871-893.
54. Hofstede, G., 1998. Identifying organisational subcultures: an empirical approach. *J. Manag. Stud.* 35 (1), 1–12.
55. Ibrahim, C.K.I.C., Costello, S.B. and Wilkinson, S. (2013a), “Development of a conceptual team integration performance index for alliance projects”, *Construction Management and Economics*, Vol. 31 No. 11, pp. 1128-1143.
56. Ibrahim, C.K.I.C., Costello, S.B. and Wilkinson, S. (2013b), “Key practice indicators of team integration in construction projects: a review”, *Team Performance Management: An International Journal*, Vol. 19 Nos 3/4, pp. 132-152.
57. Jefferies, M., Brewer, G.J. and Gajendran, T. (2014), “Using a case study approach to identify critical success factors for alliance contracting”, *Engineering, Construction and Architectural Management*, Vol. 21 No. 5, pp. 465-480.
58. Jensen, M. C., and Meckling, W. H. (1976). Theory of the firm: Managerial behavior, agency costs and ownership structure. *Journal of Financial Economics*, 3(4), 305–360.[doi:10.1016/0304-405X\(76\)90026-X](https://doi.org/10.1016/0304-405X(76)90026-X)
59. Jensen, M. C., and Ruback, R. S. (1983). The market for corporate control: The scientific
-



- 
- evidence. *Journal of Financial Economics*, 11(1–4), 5–50. doi:10.1016/0304-405X(83)90004-1.
60. Jones, C., Lichtenstein, B.B., 2008. Temporary inter-organisational projects: how temporal and social embeddedness enhance coordination and manage uncertainty. In: Cropper, S., Ebers, M., Huxham, C., Smith Ring, P. (Eds.), *The Oxford Handbook of Inter-Organisational Relations*. Oxford University Press, Oxford, pp. 231–255.
61. Joslin, R., and Muller, R. (2016). The relationship between project governance and project success. *International Journal of Project Management*, 34(4), 613–626. doi:10.1016/j.ijproman.2016.01.008
62. Klakegg, O.J., Williams, T., Magnussen, O.M., 2009. *Governance Frameworks for Public Project Development and Estimation*. Project Management Institute, Inc, Newton Square, PA, USA.
63. Klakegg, O.J., Williams, T., Magnussen, O.M., and Glasspool, H. (2008). *Governance Frameworks for Public Project Development and Estimation*. *Project Management Journal* 39 (1): 27–42.
64. Kochhar, Rahul. 1996. Explaining firm capital structure: The role of agency theory vs. transaction cost economics. *Strategic Management Journal* 17: 713–28.
65. Lahdenpera, P. and Koppinen, T. (2009) Financial analysis of road project delivery systems. *Journal of Financial Management of Property and Construction*, 14(1), 61–78.
-

- 
66. Le Breton-Miller, I., Miller, D., 2009. Agency vs. stewardship in public family firms: a social embeddedness reconciliation. *Enterp. Theory Pract.* 33 (6), 1169–1191.
67. Lenfle, S., and Loch, C. H. (2010). Lost roots: How project management came to emphasise control over flexibility and novelty. *California Management Review*, 53(1), 32–55.
68. Li, J. and Hambrick, D.C. (2005), “Factional groups: a new vantage on demographic fault lines, conflict, and disintegration in work teams”, *Academy of Management Journal*, Vol. 48 No. 5, pp. 794-813.
69. Lloyd-Walker, B. M., Mills, A. J., and Walker, D. H. T. (2014). Enabling construction innovation: The role of a no-blame culture as a collaboration behavioural driver in project alliances. *Construction Management and Economics*, 32 (3), 229–245.
70. Love, P.E.D., Davis, P.R. and Chevis, R. (2011), “Risk/reward compensation models in alliances delivery of civil engineering infrastructure projects”, *ASCE Journal of Construction Engineering and Management*, Vol. 137 No. 2, pp. 127-136.
71. Lu, P., Guo, S., Qian, L., He, P. and Xu, X. (2015), “The effectiveness of contractual and relational governances in construction projects in China”, *International Journal of Project Management*, Vol. 33 No. 1, pp. 212-222, <https://doi.org/10.1016/j.ijproman.2014.03.004>
72. Maslow, A.H., 1970. *Motivation and Personality*. Harper and Row, New York, NY, USA.
73. Mayer, Roger C., James H. Davis, and F. David Schoorman. 1995. An integrative model of organisational trust. *Academy of Management Review* 20:709–34.
-

- 
74. Merrow, E. W. (2011). *Industrial Megaprojects: Concepts, Strategies, and Practices for Success*. Hoboken, New Jersey: John Wiley and Sons ISBN: 9780470938829 .
75. Miller, R., and Lessard, D. R. (2000). *The Strategic Management of Large Engineering Projects: Shaping Institutions, Risks, and Governance*. Cambridge, MA: The MIT Press ISBN: 9780262122368.
76. Miller, R., and Hobbs, B. (2005). Governance regimes for large projects. *Project Management Journal*, 36(3), 42–51.
77. Miller, R., and Lessard, D.R. (2007) *Evolving Strategy: Risk Management and the Shaping of Large Engineering Projects*. MIT Sloan Research Paper No. 4639-07. <https://ssrn.com/abstract=962460> or <http://dx.doi.org/10.2139/ssrn.962460>.
78. Morris, P. W. G., and Hough, G. H (1987). *The Anatomy of Major Projects: A study of the reality of project management*. Winchester: John Wiley ISBN: 9780471915515 .
79. Muller, R. and Hobbs, B. (2005). Governance Regimes for Large Complex Projects. *Project Management Journal* 36 (3): 42–50.
80. Muller, R. (2009). *Project governance*. Aldershot, UK: Gower Publishing
81. Muller, R., 2011. Project governance. In: Morris, P., Pinto, J.K., Söderlund, J.(Eds.), *Oxford Handbook of Project Management*. Oxford University Press, Oxford, UK, pp. 297–320.
82. Muller, R., Pemsel, S., Shao, J., 2015. Organisational enablers for project governance and

- 
- governmentality in project-based organisations. *Int. J. Proj. Manag.* 33 (4), 839–851.
83. Muller, R., Turner, J.R., Andersen, E.S., Shao, J. and Kvalnes, (2016), “Governance and ethics in temporary organisations: the mediating role of corporate governance”, *Project Management Journal*, Vol. 47 No. 6, pp. 7-23, available at: <https://doi.org/10.1177/875697281604700602>
84. Muller, R., Zhai, L. and Wang, A. (2017), “Governance and governmentality in projects: profiles and relationships with success”, *International Journal of Project Management*, Vol. 35 No. 3, pp. 378-392,
85. National Association of State Facilities (2010). *Integrated Project Delivery for Public and Private Owners*, National Association of State Facilities Administrators (NASFA), Construction Owners Association of America (COAA), The Association of Higher Education Facilities Officers (APPA), Associated General Contractors of America (AGC) and American Institute of Architects (AIA). Available at <http://www.agc.org/galleries/projectd/IPD%20for%20Public%20and%20Private%20Owners.pdf>.
86. National Audit Office. (2004a). *Major IT Procurement: The Impact of the Office of Government Commerce’s Initiatives on Departments and Suppliers in the Delivery of Major IT enabled Projects*. Report to the Comptroller and Auditor General HC 877: Session 2003–2004, London. Retrieved from: <https://www.nao.org.uk/wp-content/>
-

---

uploads/2004/11/0304877es.pdf.

87. Nguyen, N.M., Killen, C.P., Kock, A. and Gemünden, H.G. (2018), “The use of effectuation in projects: the influence of business case control, portfolio monitoring intensity and project innovativeness”, *International Journal of Project Management*, Vol. 36 No. 8, pp. 1054-1067, available at:<https://doi.org/10.1016/j.ijproman.2018.08.005>.
88. Oliver, C. (1997). Sustainable competitive advantage: Combining institutional and resource based views. *Strategic Management Journal*, 18(9), 697–713.
89. Oxford Economics 2017 Global Infrastructure Outlook (2017). <https://oxfordeconomics.com/recent-releases/GlobalInfrastructure-Outlook>
90. Padalkar, M., Gopinath, S., 2016a. Are complexity and uncertainty distinct concepts in project management? A taxonomical examination from literature. *Int. J. Proj. Manag.* 34 (4), 688–700.
91. Padalkar, M., Gopinath, S., 2016b. Six decades of project management research: thematic trends and future opportunities. *Int. J. Proj. Manag.* 34 (7), 1305–1321.
92. Perrow, C. (1986). *Complex organisations*. New York, NY: Random House.
93. Pinto, J.K., 2014. Project management, governance, and the normalization of deviance. *Int. J. Proj. Manag.* 32 (3), 376–387.

- 
94. Pitsis, T. S., Sankaran, S. , Gudergan, S. , and Clegg, S. R. (2014). Governing projects under complexity: Theory and practice in project management. *Int. J. Project Management*, 32 (8), 1285–1290
95. Pitsis, A., Clegg, S. Freeder, D.,Sankaran, S., and Burdon, S. (2018). Megaprojects redefined complexity vs cost and social imperatives. *Int. J. Managing Projects in Business*, 11 (1), 7–34.
96. PMI, 2013b. A Guide to the Project Management Body of Knowledge (PMBOK® Guide). [sims.monash.edu.au](http://sims.monash.edu.au). fifth ed. Project Management Institute, Newtown Square, PA.
97. Pryke, S.D., 2005. Towards a social network theory of project governance. *Constr. Manag. Econ.* 23 (9), 927–939.
98. Qiu, Y., Chen, H., Sheng, Z.and Cheng, S. (2019). Governance of institutional complexity in megaproject organisations. *Int. J. Project Management*, 37 (3), 425–443.
99. Rahman, M. and Kumaraswamy, M. (2002) Joint risk management through transactionally efficient relational contracting. *Construction Management and Economics*, 20(1), 45–54.
- 100.Roehrich, Jens. K., Kostas Selviaridis, Jas Kalra, Wendy Van der Valk, and Feng Fang. 2020. “Inter-Organisational Governance: A Review, Conceptualisation and Extension.” *Production Planning and Control* 31 (6): 453–469. doi:10.1080/09537287.2019.1647364
- 101.Ross, J. (2006) *Project Alliancing: Practitioners’ Guide*, The Department of Treasury and Finance, Melbourne, Victoria.
-

- 
102. Ruuska, I., Ahola, T., Artto, K., Locatelli, G., Mancini, M., 2011. A new governance approach for multi-firm projects: lessons from Olkiluoto 3 and Flamanville 3 nuclear power plant projects. *Int. J. Proj. Manag.* 29 (6), 647–660.
103. Sakal, M. (2005) Project alliancing: a relational contracting mechanism for dynamic projects. *Lean Construction Journal*, 2(1), 67–79.
104. Sappington, David E. M. 1991. Incentives in principal-agent relationships. *Journal of Economic Perspective* 5 (2): 45–66.
105. Scott, W. R. (1995). *Institutions and organisations*. Thousand Oaks, CA: Sage.
106. Scott, W. R., Levitt, R. E., and Orr, R. J. (2011). *Global projects: Institutional and political challenges*. Cambridge, England: Cambridge University Press.
107. Sergeeva, N. and Zanello, C., 2018. Championing and promoting innovation in UK megaprojects. *International journal of project management*, 36, 1068–1081.
108. Sharma, Chandan. 2012. Determinants of PPP in infrastructure in developing economies. *Transforming Government: People, Process and Policy* 6: 149–66.
109. Shenhar, A. and Holzmann, V. (2017), “The three secrets of megaproject success: clear strategic vision, total alignment, and adapting to complexity”, *Project Management Journal*, Vol. 48 No. 6, pp. 29-46, available at: <https://doi.org/10.1177/875697281704800604>
110. Shenhar, A. J. (2001). One size does not fit all projects: Exploring classical contingency domains. *Management Science*, 47, 394–414.
-

- 
111. Shenhar, A. J., and Dvir, D. (2007). *Reinventing project management: The diamond approach to successful growth and innovation*. Boston, MA: Harvard Business School Press.
112. Simard, M., Aubry, M. and Laberge, D. (2018), “The utopia of order versus chaos: a conceptual framework for governance, organisational design and governmentality in projects”, *International Journal of Project Management*, Vol. 36 No. 3, pp. 460-473, available at: <https://doi.org/10.1016/j.ijproman.2018.01.003>
113. Söderlund, J., 2011. Pluralism in project management: navigating the crossroads of specialization and fragmentation. *Int. J. Manag. Rev.* 13 (2), 153–176
114. Söderlund, J., Sankaran, S., and Biesenthal, C. (2017). The Past and Present of Megaprojects. *Project Management Journal* 48 (6): 5–16.
115. Söderlund, J., and Sydow, J. (2019). Projects and institutions: Towards understanding their mutual constitution and dynamics. *Int. J. Project Management*, 37 (2), 259–268.
116. Thomson, Ann Marie ; Perry, James L. ; Miller, Theodore K. (2009). *Conceptualizing and Measuring Collaboration*, OXFORD: Oxford University Press, *Journal of public administration research and theory*, 2009, Vol. 19 (1), p. 23-56
117. Toivonen, A. and Toivonen, P.U. (2014), “The transformative effect of top management governance choices on project team identity and relationship with the organisation – an agency and stewardship approach”, *International Journal of Project Management*, Vol. 32
-



---

No. 8, pp. 1358-1370, <https://doi.org/10.1016/j.ijproman.2014.07.001>

118. Too, E.G. and Weaver, P. (2014), “The management of project management: a conceptual framework for project governance”, *International Journal of Project Management*, Vol. 32

No. 8, pp. 1382-1394, available at: <https://doi.org/10.1016/j.ijproman.2013.07.006>

119. Turner, J. R. (2009). *The handbook of project-based management* (Vol. 92): New York, NY: McGraw-Hill.

120. Turner, J. R., and Keegan, A. (2001). Mechanisms of governance in the project-based organisation: Roles of the broker and steward. *European Management Journal*, 19(3), 254–267.

121. Turner, J. R., and Muller, R. (2003). On the nature of the project as a temporary organisation. *International Journal of Project Management*, 21(1), 1–8. doi:10.1016/S0263-7863(02)00020-0

122. Turner, J. R., and Muller, R. (2005). The project manager’s leadership style as a success factor on projects: A literature review. *Project management journal*, 36(2), 49–61.

123. Turner, J. Rodney ; Keegan, Anne (1999). *The versatile project-based organisation: governance and operational control*, London: Elsevier Ltd *European management journal*, 1999, Vol.17 (3), p.296-309

124. Turner, R. J., Huemann, M., Anbari, F. T., and Bredillet, C. N. (2010). *Perspectives on projects*. New York, NY: Routledge.

- 
125. Ul Musawir, A., Serra, C.E.M., Zwikael, O. and Ali, I. (2017), "Project governance, benefit management, and project success : towards a framework for supporting organisational strategy implementation", *International Journal of Project Management*, Vol. 35 No. 8, pp. 1658-1672, available at: <https://doi.org/10.1016/j.ijproman.2017.07.007>
126. United Nations (UN) (2021). *The Sustainable Development Goals Report 2021*. New York, NY: The United Nations <https://unstats.un.org/sdgs/report/2021/>.
127. Van Marrewijk, A., Clegg, S. R., Pitsis, T. S., and Veenswijk, M. (2008). Managing public-private megaprojects: Paradoxes, complexity and project design. *International Journal of Project Management*, 26, 591–600.
128. Van Marrewijk, A., Ybema, S., Smits, K. et al. (2016). Clash of the Titans: Temporal Organizing and Collaborative Dynamics in the Panama Canal Megaproject. *Organisational Studies* 37 (12): 1745–1769.
129. Walker, D., Hampson, K. and Peters, R. (2002) Project alliancing vs project partnering: a case study of the Australian National Museum Project. *Supply Chain Management*, 7(2), 83–91
130. Walker, D.H.T. and Lloyd-Walker, B.M. (2015), *Collaborative Project Procurement Arrangements*, Project Management Institute, Newtown Square, PA.
131. Williamson, O., 1979. Transaction-cost economics: The governance of contractual relations. *J. Law Econ.* 22 (2), 233–261.
-

- 
132. Williams, T., and Samset, K. (2012). *Project governance: Getting investments right*. Palgrave Macmillan.
133. Winch, G. M., and Leiringer, R. (2016). Owner Project Capabilities for Infrastructure Development: A Review and Development of the “Strong Owner” Concept. *International Journal of Project Management*, 34 (2), 271–281. [10.1016/j.ijproman.2015.02.002](https://doi.org/10.1016/j.ijproman.2015.02.002).
134. Yusoff, W. F. W., and Alhaji, I. A. (2012). Insight of corporate governance theories. *Journal of Business and Management*, 1(1), 52–63. [doi:10.12735/jbm.v1i1p52](https://doi.org/10.12735/jbm.v1i1p52)
135. Zwikaël, O., and Smyrk, J. (2015). Project governance: Balancing control and trust in dealing with risk. *International Journal of Project Management*, 33(4), 852–862. [doi:10.1016/j.ijproman.2014.10.012](https://doi.org/10.1016/j.ijproman.2014.10.012)

---