

## *Classic perspectives to project governance: transaction cost economics, agency theory, and stewardship theory*

### Abstract

Research on project governance draws on, in addition to literature on project organizing, to a limited extent also on broadly recognized – and utilized - governance theories. This chapter discusses the implications of three classic governance theories namely transaction cost economics (TCE), agency theory (AT), and stewardship theory (ST) for our understanding on project governance. Each of these widely utilized theories approaches governance from a different perspective. In addition, these theories also embed strong assumptions regarding the motives of individual decision-makers to collaborate. In addition to describing the key assumptions, concepts, and frameworks of the three classic governance theories, the present chapter outlines some of the main implications of these three theoretical lenses on our understanding on project governance as a phenomenon of ongoing discussion within project organizing research.

Keywords: project governance; transaction cost economics; agency theory; stewardship theory; behavioral assumptions

### Introduction

Interorganizational projects tie several organizations which are heterogeneous in terms of their resources, practices and goals temporarily together as a project network. In this project network, the participating organizations form a nexus of treaties (Winch 2006), which is interconnected by means of relational and contractual ties that influence the behavior of actors participating in the project. In this chapter project governance is defined as the combination of contractual as well as noncontractual mechanisms, such as trust, for coordinating, monitoring, and safeguarding transactions in interorganizational projects. In particular, we focus on the governance of the commercial interface between the project owner and its suppliers (Winch 2014), but also the governance arrangements that are in place between the suppliers and other actors further down the project supply chain. Until to date the academic discussion on project governance has been largely concentrated on describing various contractual and noncontractual mechanisms that may be in place, as well as identifying conditions under which certain mechanisms should be favored over alternative mechanisms. As an example, in case the main contractor and important subcontractors working on the project have worked with each other in the past, it is increasingly likely that they

been able to integrate their processes, leading to increased efficiency and reduced need for using resource-intensive mechanisms for monitoring progress of work such as frequent progress reporting and quality inspections (Eccles 1981).

Earlier research (Ahola et al. 2014) has shown that the academic discussion on project governance has mostly built on earlier research on project organizing, whilst the influence of many theories which are widely used in the general management domain has been much more limited. As this is the case, the purpose of this chapter is to examine three widely-used theories: transaction cost economics (TCE), agency theory (AT), and stewardship theory (ST) and consider their implications for project governance. Contractual arrangements between a buyer and a seller (or a principal and an agent) lie at the heart of these theories, and as such they are of high relevance to academics and practitioners working in the field of project governance. To provide an example of how these three theories may contribute to the complex decision-making processes that take place in projects, let's consider a firm which is responsible for tiling twenty bathrooms in a construction project. In order to increase the profitability of the work, the manager responsible for the delivered entity is now considering the option of further subcontracting the tiling of ten of those bathrooms to a subcontractor. Here, transaction cost economics would inform us that there are significant transaction costs that relate to finding a suitable subcontractor, formulating a contract and overseeing the progress of work. Thus, the manager should decide to subcontract work only in case if the sum of these transaction costs and the money paid to the subcontractor is lower than what it would cost to do the work internally. An analysis of the same situation from an agency theoretical perspective, would highlight that the goals of the firm responsible for the tiling and the subcontractor might conflict with each other. For example, the subcontractor could potentially decide to use low quality materials or less skilled workforce to reduce its costs and to increase its profits. Furthermore, and depending on how the contract between the firm and the subcontractor is drafted, the firm might later be held responsible for problems that might arise later (e.g. tiles falling down from the bathroom walls). Finally, stewardship theory would highlight the possibility that the subcontractor may very well be willing to invest its best resources to the task at hand, for the best of the project. It is also possible, that the subcontractor aims to develop a long-term collaborative relationship with its client. If this were the case, the firm should support the subcontractor so that it is able to perform at its best, for example, by providing the subcontractor a significant degree of autonomy regarding decisions how to perform the work and what materials to use.

All three aforementioned theories provide the manager responsible for the decision potentially valuable insights. However, to a degree, these insights conflict with each other. Transaction cost economics emphasizes efficiency, agency theory emphasizes control and stewardship theory emphasizes autonomy. Essentially, control and autonomy are opposites to each other. This gives rise to the question; under what kind of conditions can the three aforementioned theories provide valuable insights to decision-makers responsible for planning and implementing interorganizational projects? I proceed to explore this question by first introducing the three classic governance theories, discussing their main assumptions, variables, and areas of application. In addition, I provide further examples of how they may apply to project contexts. Following the introduction of the theories, I proceed to discuss their implications for project governance, in particular from the viewpoint of beliefs and attitudes of decision-makers, culture, shadow of the past, project complexity, and multilateral contracting.

#### Transaction cost economics

The transaction cost economics (TCE) framework was by introduced by Nobel laureate Oliver Williamson during the 70's and 80's (1975, 1985). Drawing heavily on Coase's (1937) treatise on the boundaries of the firm, TCE is concerned with identifying the economically most efficient governance structure for a given transaction. In a project context, the contracts that are formed between the client, the main contractor, and various subcontractors represent the focal transactions under analysis. A large project may involve dozens if not hundreds of firms and – at least – a similar number of contracts between the involved firms. The TCE framework builds on two assumptions concerning economic actors. First, actors are assumed to be boundedly rational, that is, actors do not always come up with the optimal solution to a decision that they need to make. Second, actors are assumed to be prone to opportunistic behavior, i.e. "self-interest seeking with guile" (Williamson 1985, p. 47). This means that provided the opportunity to do so arises, an organization involved in a project may prioritize its own self-interest at the cost of the other party involved in the transaction.

The concept of transaction cost is fundamental to TCE. Transaction costs can be considered as the economic equivalent of friction that takes place in the physical world. In a project context, the transaction costs related to contractual arrangements include, e.g. the costs of specifying the scope of the contracted work, announcing the tender, selecting the most suitable contractor, drafting a contract, and monitoring that the contractor carries out its responsibilities as agreed in the contract.

Transaction costs occur both to the buyer and the seller and they are very significant, ranging from a few per cents to more than ten percent of the total costs of operations (Merkert et al. 2012; Pearson et al. 2012).

According to the TCE framework, three central variables: uncertainty, asset specificity, and frequency of transactions influence the choice between and efficiency of alternative governance approaches. Uncertainty, which closely relates to the concept of risk in project management literature (Macmillan 2000), refers to lack of knowledge concerning how the business environment will develop as well as lack of knowledge concerning the behavior of actors in this environment. The more the uncertainty, the more complex mechanisms should be put in place to protect from it. As an example, a subcontractor may try to protect from the possibility of material costs raised during the project by including a contractual mechanism to transfer some or all of these price increases to the client. Zhang et al. (2018) discuss how owners of construction projects purposefully utilize formal contracts to execute power and reduce opportunism from contractors. Asset specificity relates to resources or processes that cannot be easily put to use in other transactions. For example, a subcontractor doing demanding welding work may need to invest in bespoke equipment and/or training that is of little use for work carried out for other clients (Ahola et al. 2017). As such, asset specificity may give rise to lock-ins where the invisible hand of the market mechanism does not operate as theory would dictate. Frequency of transactions is also important. More elaborate - and costly - monitoring and coordination arrangements are often developed for contracts that are large in their scope and duration. Such complex and bespoke arrangements are, however typically not feasible for repeated smaller transactions, such as buying routine scaffolding work for a construction project. As an example of use of bespoke mechanisms, Demirel et al. (2022) discuss mechanisms used by private financiers to protect their assets in infrastructure project deliveries.

### Agency theory

Agency theory concentrates on the nature and management of principal-agent relationships in which the principal and agent are bound by a contractual agreement (Jensen & Meckling, 1976). In such relationships the principal commissions the agent to act on its behalf by delegating decision-making authority to the agent. Agency theory assumes that the principal and agent both seek self-interest and possess idiosyncratic goals, which may - and frequently do - conflict with the goals of the other party. As an example, it may be in the interest of the agent to maximize its personal gain at the cost of the principal. Typical principal-agent relationships discussed in the literature includes the

relationships between the board of owners of a firm and the CEO, as well as the relationship between investors and fund managers.

Two main variables affecting how agency relationships are likely to be governed by the principal are goal incongruence, and information asymmetry. The higher the goal incongruence; that is, the degree to which the goals of the principal and the agent conflict with each other, the more important it is for the principal to utilize governance mechanisms that motivate the agent to act in the best interest of its principal. Such mechanisms may include, for example, monetary or stock option arrangements paid based on agent performance, and penalizing arrangements that harm the agent in case its behavior notably diverges from the owner's expectations. In case information asymmetry is high; that is much information held by the agent is not available to the principal or vice versa, the principal is inclined to employ mechanisms specifically targeted at monitoring the behavior of the agent, such as detailed cost reporting procedures or systems.

Principal-agent relationships are commonplace in project contexts. Ahola et al. (2021) concentrated on these relationships across the project life cycle, arguing that sales agents and external consultants represent typical agents used in the project marketing phase, subcontractors and specialized consultants are typical agents employed in the implementation phase, and maintenance partners and service providers are frequently utilized by principals during the operations phase of a project life cycle. Frequent challenges addressed by principals in managing their agents include: agents may serve the competitors of their principals and can potentially leak business critical information; agents may hide quality problems in their work from principals; and agents serving the principals' customers may lack motivation to maintain a high level of end-customers satisfaction (ibid.). To counter these problems, project-based firms (as principals of agents) may use specific governance mechanisms such as contractually limiting their agents from serving their competitors, requiring relation-specific investments from agents, and performing quality audits on agents' premises. Nwajei et al. (2022) argue that agency theory plays a particularly important role in infrastructure projects implemented with relational project delivery models, such as project alliances, which build on the importance on aligning the goals of key project stakeholders.

### Stewardship theory

While both transaction cost economics and agency theory have their roots primarily in economics, stewardship theory draws mostly on research on psychology and sociology (Hirsch et al. 1987).

Stewardship theory concentrates primarily on identifying and understanding situations in which

managers and other agents do not behave in an opportunistic self-interest maximizing way but rather choose to act as stewards whose motives are aligned with those of their principals (Davis et al. 1997). Instead of emphasizing the propensity of economic actors to seek self-interest, ST posits that pro-organizational, collectivistic behaviors have more utility. Consequently, when a steward has to make a choice between its own gain and the benefits of the broader organization, it is assumed that the steward will choose the latter. Following this assumption, it is in the best interests of the principal to ensure sufficient autonomy of the steward so that it is able to serve the principal to its full potential. In short, according to ST, instead of establishing safeguards and monitoring practices to limit the behavior of the agent, the principal maximizes its utility by empowering the steward to act to the benefit of everyone, the steward, the principal, and the society as a whole.

In a project setting, individuals as well as organizations may assume the role of a steward. A project manager working for a project-based firm may be highly committed to its employer and prioritize the long-term business benefits of the project-based firm over the short-term cost, scope, and time objectives established for the project, even though these objectives are frequently used for assessing the performance of the project manager (Toivonen & Toivonen, 2014). Similarly, a subcontractor firm working in a project may choose to make significant investments in resources and capabilities that cannot become profitable during the course of a single project, because it is motivated by working for the “good of the shared project” as well as being motivated by the prospect of working together with the same client in subsequent projects. In addition to delivery projects, working together as an inter-organizational team is also vital in project marketing, as the customer expects to know the identities of all organizational actors contributing to the project with a major role (Ahola et al. 2013).

It is rather easy to argue that stewardship theory conflicts with much of earlier project research that has characterized project-based industries such as the construction industry as adversarial (Kadefors 2004) and highlighted the culture of filing claims to maximize own benefits, particularly within the project-based construction industry (Rooke & Fellows 2003). Indeed, few would disagree that problems and disputes of various intensity between the involved actors are commonplace in many large projects. However, a significant stream of recent project research has also paid considerable attention towards relational project delivery models such as project alliances, project partnering, and integrated project delivery (e.g. Lahdenperä 2012). In these kinds of delivery models, a central purpose of the project organization and the contractual agreements between the involved organizations is to ensure that they all work towards a shared goal, and problems that – inevitably –

arise during project implementation are problems shared by all actors, instead of being outsourced to others via shady business practices and unfair and one-sided contractual arrangements. Specific governance mechanisms mentioned in the literature include, for example, multilateral contracting, gain and pain sharing arrangements, team-building workshops, and cross-organizational problem-solving arrangements (Lahdenperä 2012; Kujala et al. 2020). It is important to highlight that relational mechanisms emphasized in relational governance arrangements are insufficient to fully tackle opportunistic behavior in found in many projects, but that complementary formal mechanisms are also needed (Galvin et al. 2021). Lieu et al. (2022) have also suggested that boards of complex public-private projects should be broadened and strengthened as this would possibly support the internal organizational governmentality of the project.

## Discussion

Literature on project governance has highlighted that no governance structure is superior to another as such. Instead, it should be tailored to align with the characteristics of each project and its specific context (Artto & Kujala 2008; Ruuska et al. 2011). For example, in case the project owner is a so-called "strong owner", (Winch & Leiringer, 2016) i.e. has strong capabilities, for example, in engineering and project management, a governance structure in which the owner assumes a coordinative role is likely to be effective whereas in a situation in which the owner lacks such capabilities, coordination of the project is best outsourced to a complementary partner with strong integrative capabilities (Davies et al. 2007). Also, when the technical complexity and novelty of the project deliverable are high, governance mechanisms emphasizing interorganizational collaboration are likely to be more appropriate than those emphasizing lowest possible costs, such as, for example encouraging suppliers to compete based on lowest price alone. As an example of how the project context may influence the process of tailoring the governance structure, let's consider the availability of skilled subcontractors in the marketplace. In case high-level expertise is abundantly available for the purposes of the project, the need to resort to quality assurance practices such as supplier auditing is reduced, and in case available suppliers are lacking such expertise, the project owner may need to establish bespoke practices for supplier certification and training so that the project may proceed without interruptions related to supplier expertise.

In addition to project-specific and context-specific characteristics that have been discussed in earlier literature on project governance, this chapter draws our attention towards a third perspective; that is, how the context and the underlying assumptions of the individual decision-makers representing various organizations working in the project align with those of the three theories discussed above.

While there organizational-level decision making and individual-level decision making are different (yet strongly related), project-related decision-making is, to a considerable extent, centered to a handful of powerful individuals, such as the project manager, the project steering group chairperson, etc. As this is the case, scrutinizing beliefs and motives influencing individual-level decision-making is arguably warranted. The contextual elements and the underlying assumptions discussed in the following are:

- Beliefs and attitudes of key decision-makers involved in the project organization
- National, industry-level, and organizational cultures
- Shadow of the past, i.e. the shared history of involved project actors
- Organizational and technical complexity of the project

Beliefs and attitudes of central decision-makers working in a project have a profound influence on its management. From a project governance perspective, a central question is that how individuals responsible for subcontracting arrangements, monitoring of suppliers and coordination of work across organizational boundaries expect people to make decisions and behave in the project. If a shared underlying assumption is that everyone working for the project is prone to opportunistic behavior, it would be rather illogical to invest a considerable amount of time and resources into relational governance mechanisms promoting open information sharing and problem-solving across organizational boundaries. Indeed, it would be more consistent with these beliefs to ensure that carefully drafted contractual safeguards, such as penalties for quality problems with and failures to meet agreed schedule are in place. To continue, monitoring of project progress should be optimized towards detecting problems and finding out who is foremost responsible for them. But contrary to the example above, key decision-makers can also have a more trustful view of individuals and organizations (as they are inherently social structures composed of and by individuals). Many individuals do believe that individuals are most productive and innovative when they are trusted and provided with sufficient autonomy to make decisions. And when trusted, people often behave in a trustworthy manner. These beliefs are likely further strengthened, if key decisions-makers know many representatives of suppliers on a personal level, and have not encountered any evidence of distrustful or opportunistic behavior on their behalf in the past. If this is the case, drafting very detailed contracts with hard in-built sanctions may be considered an indication of distrust, and as such, is likely to function as a mechanism reducing motivation of individuals to perform at their best.



Personal-level beliefs are strongly related to organizational, industry- and national level cultures. Organizations – including project-based firms - differ like night and day regarding their approaches to motivating, monitoring, and rewarding their employees. Industry-wide culture has also been a widely discussed theme in project research. As an example, the culture of the construction industry has been criticized by many as opportunistic and even adversarial (Kadefors 2004). However, more recent research has also provided examples of construction projects involving a shared best-for-the-project culture (e.g. Davies et al. 2009). At a national level, highly individualistic cultures such as the US and the UK could potentially promote views that everyone is foremost responsible for their own success and not that of their employer – and even less than that the project they are currently working for. This is however, far from certain as the presence of behavioral differences that would be explained by national culture, were not supported by Winch et al. (1997) study of the Transmanche-Link project involving France and the UK. Thus, at a highly abstract level, the underlying beliefs of TCE and AT are somewhat more aligned with beliefs generally held in individualistic cultures whereas the central tenets of ST are more in line with belief systems of collectivistic cultures.

It has been argued that “no project is an island” (Engwall, 2003), and this important statement has implications for governance approaches used in projects as well. Experiences of past collaboration influence behavior today, as do also actors’ expectations of potential future collaboration. The prisoner’s dilemma, which has been widely analyzed in game theory and applied in many areas of science including, for example, economics, has also relevance for project governance. The basic idea in prisoner’s dilemma is that when two parties collaborate, the total utility is maximized. However, when one actor betrays the other, the betraying actor may benefit at the cost of the betrayed actor. As earlier project research has shown that project-based firms often work with each other from a project to the next, this situation can be considered as an iterated prisoner’s dilemma in which the game is played for several rounds. In practice, this means that if the experiences of all actors of working together have been positive, the likelihood of betrayal (opportunistic behavior) is likely to decrease, but in case one or more actors resort to opportunistic behavior during a project, it is likely that the other actors will also resort to such actions in future projects. The shadow of the future; that is, the expectation of future collaboration is also important here. In case, all project participants were to know that they will not be working with each other ever again, the other actors will not have the opportunity to “punish” them for their opportunistic behavior, in case they decide to engage in it. From a project governance perspective, a manager whose belief system is more in line with TCE and AT assumptions, would look at the situation as a calculus-based game, in which

opportunistic behavior is one natural move that actors may select, whereas a manager who thinks more in line with stewardship theory would emphasize the fact that total utility is maximized when everybody collaborates openly, and thus individuals and firms have a natural tendency to prioritize cooperative behaviors. These are very different approaches for “playing the game”.

Organizational and technical complexity of the project are important antecedents for the project governance structure, as the needs for coordinating and monitoring work vary considerably across projects. For example, projects established to produce relatively simple outcomes, such as standardized apartment buildings, may involve the main contractor and just a handful of subcontractors in clearly assigned roles (such as electrical installations, tiling, painting). In these kinds of projects of relatively low organizational and technical complexity, there is little need for establishing elaborate governance mechanisms that support the autonomy, creative problem-solving behavior, and innovativeness of involved actors. Instead, contracts are typically relatively simple, and lump-sum based. In contrast, when the project deliverable is highly unique and inherently difficult to build, such as for example, the construction of a new high-speed train system in a historical city center, the project organization typically consists of a relatively large network of actors. In these kinds of settings, a key requirement for the project governance structure is to enable these actors to work seamlessly together for the benefit of the project, developing innovative designs, and solving problems in cross-organizational teams as they arise. It is somewhat likely, that lump-sum contracts and the traditional market-based logic inherent in TCE does not work effectively here. Instead, governance mechanisms such as co-location spaces, cross-functional problem-solving arrangements, and project culture-building workshops are much more likely to be effective. In addition, the risks and incentives of central project actors may be aligned and connected via project alliance agreements, that are discussed further below.

What unites TCE, AT, and ST is that they all primarily focus on dyadic arrangements between a buyer and a seller, or a principal and an agent. An interorganizational project can be conceived as a nexus of multiple transactions (Winch 2006). In large projects, the number of contracts can be dozens or even hundreds. The problem here, in regard to the three aforementioned theories is that the theories do not direct attention towards the potential interrelatedness of contractual arrangements. As an example, we can consider a building project in which a 2<sup>nd</sup> tier subcontractor has ordered materials needed in completion of its tasks. Let's further assume that these materials arrive significantly later than agreed between the 2<sup>nd</sup> tier subcontractor and the materials supplier. As a consequence, the 2<sup>nd</sup> tier subcontractor will not be able to complete its task and – depending on

what is stipulated in the contract – may have to pay compensation to its client – the 1<sup>st</sup> tier subcontractor. But the problem does not necessarily stop here, instead the 1<sup>st</sup> tier subcontractor's progress may also be hindered, forcing it to pay compensation to the main contractor, which again may need to pay compensation to its client, and so on. The practical implication of all of this is that the contractual arrangements in projects are not independent but interdependent and that the governance structure developed for the project can be considered to be an aggregate of all these formal contracts, plus other noncontractual mechanisms – such as trust and open sharing of information about problems hindering task execution and joint problem-solving mechanisms - that may be in place between involved actors. Indeed, a significant problem hindering the productivity of project organizing is that many – if not most of the contracts that are formed today are developed as if they were independent from other contracts. Instead of carefully considering this interdependence, various risk reservations are often made to counter possible negative effects resulting from the undesired behavior and less-than expected performance of other actors. Multilateral alliance agreements make a notable exception to this rule. In multilateral project contracts, the key actors responsible for the project all sign a single contract which sets the shared rules for behavior in the project, but also ensures that either all actors will make a profit from the project, or all actors will make a loss from the project (Lahdenperä 2012). As such, perhaps the most important function of multilateral contracting – from the perspective of project governance - is to ensure that the interests of the key actors in a project are strongly aligned. Multilateral contracting is, however not without its set of own problems. Firstly, multilateral contracts are more complex, time consuming, and costly to develop. In addition, due to the risk of involving a poor-performing partner in the project alliance, the selection of parties needs to be done extremely carefully. Table 1 below summarizes the main implications of the three classic theories for project governance.

Table 1 – Implications of classic governance theories for project governance

	Transaction cost economics	Agency theory	Stewardship theory
General Underlying goal	Selection of most efficient governance form	Goal alignment between principal and agent	Supporting agents to promote their performance and personal growth
Assumptions concerning actor motives	Actors seek-self-interest, actors may be prone to opportunistic behavior, bounded rationality	Actors seek-self-interest, bounded rationality, risk aversion	Actors are trustworthy and act as responsible stewards of assets they control
Main variables	uncertainty, asset specificity, frequency of transactions	outcome uncertainty, information available	agent motivation, trust, organizational and national culture

Key considerations	make-or-buy decisions	how to motivate and control agents	how to allow agents to perform at their best
Implications for governance internal to a project			
	establishment of project-specific governance structures is one form of asset specificity	output-based and behavior-based mechanisms may be used to align agent interests with those of the principal	agents should have high autonomy
	monitoring of other firms in the project is difficult and costly	lump sum contracts, while cost-efficient to establish, may motivate the agent to reduce quality at the cost of the principal	limited need for monitoring, as agents are collectively motivated
	contractual and safeguards should be in place to control actor behavior	alliance agreements, while costly to establish, may be used to align interests and share risks related to the project	no real need for safeguarding as agents can be trusted
Implications for governance external to a project			
	governance of projects incurs significant transaction costs that need to be understood (e.g. involvement and coordination across multiple units)	there may be conflicts between the goals of individual project managers and goals of the firm	project managers should have a major role (possibly chairperson) in project steering group
Collective/multi-party contracting	not relevant	possible	the norm
Principal orientation in project governance	efficiency maximization	control	involvement

## Conclusions

While this chapter focuses on project governance in interorganizational projects, TCE, AT, and ST do have implications for governance of intraorganizational projects as well. Regarding this stream of literature, TCE highlights the importance of transaction costs internal to a firm. For example, the costs of monitoring the progress of several projects carried out at the same time, and establishing safeguards to protect the firm from potential malfeasance from projects managers and other team members, are highly significant, and in practice very often underestimated. AT and ST on the other hand direct our attention towards the beliefs and attitudes the senior management of a project-based firm has towards its project managers. Are the project managers – in line with agency theory thinking – considered as primarily self-interest seekers that may hide information and resort to opportunistic behaviors, or is the expectation, following more closely with ST logic, that the project managers are likely to work primarily towards the benefit of the project and the parent organization. We observe that ST logic is currently in conflict with many project management standards and methodologies which build on the assumption that task and control should be divided. Indeed, the

attitudes and often implicit beliefs guiding us have very strong implications concerning the specific governance mechanisms are used, and also how the individuals working in projects perceive their employer. Is the employer behaving like an enabler or like a distrustful controller?

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