
Transaction cost economics and construction procurement

Understanding how transaction cost economics functions as a decision-making tool in the procurement of construction projects is essential for consultants looking to secure their client's commercial interests. Ricky Plescia, director in London, discusses trade-offs during the pre- and post-contract phases.

The procurement of infrastructure assets combines finance, engineering, construction and project management services into a single structure to deliver a unique product for a client. This results in a number of complex transactions between clients, financiers, consultants, contractors and statutory authorities, each bearing the cost of searching, negotiating, entering into and sometimes renegotiating a contract. Understanding the economics and exploiting the information asymmetries underpinning these transactions can provide clients and contractors with a significant commercial advantage, allowing them to extract substantial financial benefits from projects. By focusing on the principal-agent problem, the hold-up problem and 'bounded rationality' during the pre-contract and post-contract phases of construction projects, a thorough understanding of transaction cost economics can secure significant commercial success for both clients and contractors during the procurement of construction projects.

The **principal-agent problem** deals with the dynamics that exist between parties to a transaction, namely the principal (client) and the agent (contractor). The principal usually employs an agent to provide a service that it may not have the time or expertise to perform by itself. The problem that arises here is that during different stages of a transaction, one party usually has superior bargaining power over another, allowing them to use information asymmetry to extract excess financial benefit from the other party. During the pre-contract stage of a transaction, the client has bargaining power advantage over contractors since there are various competitive options to choose from, and contractors might be willing to relinquish some of their economic advantage in order to secure a project. This allows the client to capitalise on pre-contract gains.

However, during the post-contract stage, bargaining power shifts significantly in favour of the contractor, given the high levels of information asymmetry arising from proprietary knowledge and trade secrets. Contractors can inflate costs by making goods or services appear more complex, time-consuming and costly, resulting in the loss of any pre-contract gains. This places the client at a disadvantage when dealing with changes, disputes and contract renegotiations contributing to the overall transaction cost of a project. It is essential for project managers and cost consultants to ensure that the selection of procurement and governance structures of a project align the trade-offs between pre-contract and post-contract surpluses in order to minimise their clients' exposure to post-contract information asymmetry and to protect their commercial advantage.

The **hold-up problem** is a result of the incomplete nature of contracts, meaning they cannot cover all possible eventualities. This often leads to hold-ups during transactions because:

- parties might be hesitant to make relationship-specific investments for a transaction to take place (eg where contractors are required to incur significant upfront bidding costs), and
- pre-contract investments cannot necessarily guarantee sufficient returns during post-contract negotiations (ie contractor profits are not commensurate with the cost of relationship-specific investments)

This often leads to opportunistic behaviour by one party trying to extract additional financial benefit from the other. At worst, the hold-up problem could lead to adversarial or potentially litigious disputes. Aligning procurement and governance structures with transaction-specific characteristics (such as relationship-specific investments) is essential to establish a balanced position in a transaction. Particular mechanisms in the form of bonds, guarantees, contract retentions, performance-specific payments and liquidated damages have been developed to mitigate hold-up threats and protect parties against certain eventualities. These protection mechanisms are, however, limited in the scope of cover that they provide and come at a cost that increases the overall bidding price that a client will pay.

Bounded rationality concludes that if a client or contractor has managed to procure goods or services satisfactorily, they will transact with that same supplier again even though 'better' alternatives may exist in the market. When considering construction procurement this would suggest that both clients and contractors might commit long term to a satisfactory solution in order to avoid transaction costs, thereby sacrificing the flexibility of finding better alternatives but retaining the benefit of controlling their businesses and risks with more certainty.

Conversely, this may result in gains for contractors by exploiting a client's bounded rationality and extracting increased economic value from transactions through higher pricing. The question for cost consultants and project managers is to what extent a client's value for money is compromised through bounded rationality. Of course, there are no guarantees that better alternatives exist and the transaction cost associated with potential alternatives might outweigh the benefits of the current solution. In this regard, depending on the characteristics of a project (ie programme, complexity, risk, etc), it is necessary to adopt a holistic view when advising clients on procurement strategies by considering transacting with:

- large, highly integrated contractors who command significant economies of scale, allowing them to fix long-term prices for primary resources such as steel, energy, equipment and labour, thereby reducing procurement costs and programme times, or
- smaller, less integrated contractors who mostly subcontract their production functions with the market and might not be able to reduce costs and fix long-term prices to the same extent, but who may have a greater propensity for quality, innovation and responding to changing market conditions

Construction projects comprise a plethora of transactions which can be used to extract significant economic value for clients. Consultants must adopt a holistic view when advising clients on project procurement by considering all possible transactions in the construction process and adopting procurement strategies that minimise information asymmetry and establishes a balanced trade-off position between pre-contract and post-contract surpluses.