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# **Managers' Perceptions and Microfoundations of Contract Design**

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# **Manager's Perceptions and Microfoundations of Contract Design**

## **Abstract**

In interfirm exchanges such as contracts, transaction cost economics theory (TCE) argues asset specificity, critical for value creation, poses hazards requiring contractual safeguards. TCE assumes actors have foresight to mitigate these hazards even though specificity is typically hard to observe, suggesting managers' impressions may be biased. Taking a microfoundational approach, we explore how individual negotiators form perceptions of optimal asset specificity and aggregate them to a firm-level assessment that may be influenced through negotiation. We then explore how managers may actively manipulate their counterpart's perceptions to maximize their firm's value capture. We theorize about when this may occur and the implications for contractual governance, value creation/capture, and repeated exchanges – each of which may vary from extant predictions. By applying both an expanded bounded rationality assumption (including cognitive distortions) and net value capture motivation symmetrically, we augment contract design research allowing it to predict when and how managers' strategic behavior may impact exchange outcomes. As a result, this analysis provides a more nuanced understanding of when contract design may intentionally deviate from efficient governance predictions.

## Managers' Perceptions and Microfoundations of Contract Design

A whistleblower accused Oxford University of charging a customization premium for a £1m executive education program. Upon winning, she said “*The Cabinet Office had spent so much on development fees they have a reasonable expectation of tailored materials.*” (Higgins, 2021)

While this example illustrates how perceived specific investments may impact buyer willingness to pay (WTP) in a contractual exchange, it also shows how in the pursuit of value capture, one firm's managers may influence their counterparts' perceptions. Theoretically, asset specificity, *the extent assets cannot be redeployed beyond the current transaction*, is a key driver of holdup once a supplier makes the investment (Riordan & Williamson, 1985). Transaction cost economics (TCE) (Williamson, 1985) suggests exchanges with moderate specific investments are efficiently governed through hybrids. These contracts and alliances minimize transaction costs that would otherwise emerge in market exchanges, without the significant cost of hierarchy (Williamson, 1991a). Since contracts are ubiquitous in hybrid governance, TCE researchers extensively investigate how transaction characteristics, like specificity, impact their design (Ariño, Reuer, Mayer, & Jané, 2014; Schepker, Oh, Martynov, & Poppo, 2014).

Yet, individuals negotiate contracts, not firms. While the contract design literature assumes incomplete contracts stem from bounded rationality (Foss & Weber, 2016), negotiators are still imbued with *foresight* (Williamson, 1991b). That is, they are intendedly accurate in assessing transaction attributes and adopting suitable contractual safeguards. Critiques of these TCE assumptions (Foss, 2001; Moran & Ghoshal, 1996) call for theory exploring microfoundations of contract design (Felin, Foss, & Ployhardt, 2015) that adopt more realistic assumptions (Zenger, Felin, and Bigelow (2011)).<sup>1</sup>

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<sup>1</sup> Some research augments TCE theory with heuristics and cognitive biases examining how contract frames impact managers' emotions, behaviors, and perceptions (Weber & Mayer, 2011). However, this does not explore the impact on foresight or how ex ante perceptions of transaction attributes may be manipulated to capture value.

We directly challenge this assumption of foresight by arguing contract design relies on managers' perceptions of key attributes (Joskow, 1988), which tend to be distinct, systematically biased, and malleable (open to influence). We also examine how motivation to capture net value (Dyer, 1997; Williamson, 1985) may lead managers to manipulate their counterparts' perceptions, and how this impacts contract design, value creation and repeated exchanges.

Negotiators may have incentives and opportunity to manipulate perceptions of asset specificity as it drives both value creation and governance costs (Dyer, 1997). Buyer managers may seek higher specificity (to drive unique value creation) at lower costs by deflating their counterparts' perceptions. Conversely, supplier managers are driven to inflate their counterparts' specificity perceptions to increase prices, while limiting actual specific investments. The latter is reflected in the Oxford example, which also shows this manipulation is unlikely to be discovered, or if so, attributed to partner opportunism. The opportunity to manipulate perceptions arises when one firm is *viewed* to have a task-relevant knowledge advantage (production technology expertise or knowledge about future uses), even if it does not.

Augmenting TCE's efficient governance predictions with these more realistic cognitive and motivational assumptions (Zenger et al. (2011), we make three contributions to the contract design literature and its fledgling investigation of microfoundations. First, we address the critique of foresight (Moran & Ghoshal, 1996) in contract design research by examining how specificity perceptions emerge, why they differ across firms, and how they shift during contract negotiation. Second, we contribute to the microfoundations of contract design literature by considering how pursuit of greater value capture, *ex ante*, may lead to manipulation of specificity perceptions and intentional deviation from efficient contractual safeguard predictions. For example, when supplier negotiators inflate their counterparts' specificity perceptions, we identify when there will

be an increase of control clauses not anticipated by TCE. Also, contrary to current theory on contracts and trust (Poppo & Zenger, 2002), we propose supplier manipulation is likely to continue in repeated transactions. Finally, we contribute to the value creation/capture literature by identifying conditions in which manipulating specificity perceptions may increase one firms' value capture while still maximizing net value creation, also a departure from extant predictions.

## **CONTRACT DESIGN AND ITS MICROFOUNDATIONS**

Contract design has been studied extensively (Weber, Mayer, & Wu, 2009). This established literature examines how contracts impact trust (Lumineau, 2017; Oliveira & Lumineau, 2019), proposing optimal contract designs to generate desired levels (Schepker et al., 2014). It also examines how particular transaction characteristics impact contract type (Kalnins & Mayer, 2004), level of complexity (Parkhe, 1993) or completeness (Poppo & Zenger, 2002), and inclusion of particular clauses (Reuer & Ariño, 2007: 322). For example, the impact of asset specificity, “the big locomotive to which transaction costs owes much of its predictive content” (Williamson, 1985: 56), on contracts is well established (Joskow, 1987) in this literature.

### **Transaction Characteristics and Efficient Contract Design**

Most pertinent here is how specificity and seemingly unrelated transaction attributes (task novelty and complexity) impact the use of control versus coordination clauses (Ariño et al., 2014) and task detail (Das & Teng, 1996). Understanding these base predictions allows us to show how manipulating perceptions of these characteristics alters contract design.

**Specificity drives control clauses and task detail.** Specificity is linked to risk of holdup, as a buyer may refuse to pay a supplier for specific investments once they are incurred (Klein, 2010). In repeated transactions, buyers may also be at risk due to supplier dependence (Anderson

& Gatignon, 2005). Control clauses “minimize idiosyncratic and deviant behavior, as well as... hold parties to articulated policy” (Reuer & Ariño, 2007: 322). They include safeguards to protect against such ex post opportunism, by providing rewards or penalties to avoid harmful behaviors and achieve intended outcomes. Reuer and Ariño (2007) show specificity drives inclusion of control clauses to mitigate holdup behavior. Mayer (2009), and Hoetker and Mellewigt (2009) also suggest specificity requires safeguards to mitigate risk of opportunism.

Relatedly, increased task detail is linked to specific assets (Das & Teng, 1996). Control clauses rely on comprehensive task specifications and triggers for the safeguards to assure desired outcomes and behavior. Thus, extant theory predicts task detail rises as asset specificity increases.

**Task novelty/complexity drive coordination clauses.** Task novelty (*unfamiliarity*) and complexity (*consisting of many interdependent elements*) also impact contract design. Task novelty increases the need for joint problem-solving for unforeseen challenges (Bouncken, Clauß, & Fredrich, 2016; Mayer & Argyres, 2004). Similarly, task complexity increases information needs, as more moving parts require additional communication (Das & Teng, 1996). Unlike control clauses, coordination clauses “integrate the activities of the partner firms to achieve the collective goal” (Mellewigt, Madhok, & Weibel, 2007: 836). So, instead of safeguarding against opportunism, they synchronize the parties’ actions. When tasks are hard to fully specify ex-ante, these clauses clarify roles and responsibilities, reporting, and schedules. Both task novelty and complexity engender information problems theoretically distinct from opportunism, driving coordination clause inclusion (Aggarwal, Siggelkow, & Singh, 2011; Bouncken et al., 2016).

While they both drive coordination clauses, novelty and complexity have distinct effects on task detail. Elevated complexity increases task detail, as it requires more elaboration to explain the relation between the large number of components (Das & Teng, 1996). In contrast, novelty decreases task detail, as an entirely new task is difficult to specify (Mayer & Argyres, 2004).

### **Microfoundations of Contract Design**

While these studies examine the impact of transaction attributes on contract design, recognition that individuals negotiate and fulfill contracts prompted researchers to explore how contracts impact managers' ex post cognition (Weber & Mayer, 2011). For example, contract frames influence managers' subsequent emotions, behaviors and perceptions of ambiguous behaviors, partners, and relationships (Weber & Mayer, 2011). Furthermore, these perceptions impact trust development (Weber & Bauman, 2019; Weber & Mayer, 2011) and learning (Weber, 2017).

In particular, these studies explore how prevention (*focused on avoiding negatives*) and promotion (*focused on achieving positives*) contract frames (Weber & Mayer, 2011) impact perceptions of the other party's behaviors and motivations. In contrast, perceptions of transaction characteristics are likely influenced by individual managers' cognitive frames – "*mental templates that gives form and meaning to ambiguous and complex information*" (Walsh, 1988: 281), arising from their own prior experience. This is why investigating asset specificity is critical to understanding the microfoundations of contract design – it is theoretically important, hard to measure, and individual managers will have distinct perceptions based on their varied experiences.



## PERCEIVED TRANSACTION ATTRIBUTES MAY ALTER CONTRACT DESIGN

The omission of perceptions from contract design research is especially puzzling, given that the *empirical TCE and contract design literature* relies heavily on them as proxies for asset specificity. This occurs because idiosyncratic costs and redeployability of underlying assets are hard to discern *ex ante* (De Vita, Tekaya, & Wang, 2011; Lohtia, Brooks, & Krapfel, 1994). Furthermore, as Joskow (1988: 106) laments, they are even hard to observe *ex post*,

“How do we know whether a particular investment has the specificity characteristics of interest? ... We are certainly not going to find these numbers written down neatly in a book of industry statistics. The best that we can hope for is more qualitative information...”

Yet, specificity perceptions are not examined in contract design research for two reasons. First, TCE applies the bounded rationality assumption asymmetrically (Foss & Hallberg, 2013). So, individuals are boundedly rational when predicting contract disruptions (Williamson, 1985), but not when assessing hard to observe transaction attributes (Foss, 2001). Second, TCE’s bounded rationality assumption only incorporates limitations on the *amount* of information processed not cognitive *distortions* (Foss & Weber, 2016).<sup>2</sup>

Instead, TCE’s efficient governance predictions depend on managers determining the *optimal asset specificity* ( $K^*$ ) (Riordan & Williamson, 1985; Williamson, 1991b) out of all possible levels ( $K$ ). Because production costs also vary across governance forms, efficient governance requires both production and governance costs to be minimized (Riordan & Williamson, 1985). Further, Nickerson (1997), Williamson’s student, argues optimal specificity maximizes buyer’s customer willingness to pay, while minimizing the supplier’s production costs. Thus, in TCE,

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<sup>2</sup> Williamson (1985: 46) intentionally adopted a bounded rationality assumption inconsistent with Simon (1976). He noted, while heuristics and decision processes are manifestations of bounded rationality, “transaction cost economics is principally concerned, however, with the economizing consequences of assigning transactions to governance structures.”

managers must accurately estimate (on average over time) the simultaneous maximization of customer WTP for product attributes and minimization of associated technology costs.<sup>3</sup>

Yet microfoundations of governance (Foss & Weber, 2016; Weber & Mayer, 2014) and contract design research (Weber & Bauman, 2019) demonstrate that augmenting TCE's bounded rationality assumption with cognition leads to novel predictions. Furthermore, Raffiee and Coff (2016) found that contrary to traditional predictions, organizational commitment and tenure are negatively related to perceptions of firm-specific assets. Similarly, we suggest incorporating perceptions of asset specificity will lead to novel contract design predictions.

Indeed, we argue specificity perceptions tend to alter contract design predictions for two key reasons. First, they may limit the pool of potential suppliers considered, preventing competition from correcting inaccurate perceptions. Note, this mechanism differs from Williamson's (1985) argument that the buyer has fewer future partner options, due to the supplier's development of specificity in the initial exchange. Second, negotiation across firm boundaries may increase the likelihood that value capture motives drive managers to manipulate their counterparts' malleable asset specificity perceptions affecting contract design and the resulting value creation.

Despite these likely ramifications, extant literature does not incorporate asset specificity perceptions or their potential manipulation. In the next section, we examine how these perceptions are formed, their malleability, and potential biases. We later explore when their deliberate manipulation is likely, and its impact on governance, value creation and capture. We begin by assuming discrete transactions, but subsequently examine repeated exchanges.

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<sup>3</sup> Williamson (1991: 3) carries this idea of optimal specificity ( $K^*$ ) into his dimensionalization of governance forms (using it in his classic governance predictions in iconic Figure 1 (p. 284)), suggesting that this was not limited to situations in which TCE is combined with value maximization. However, given that we later assume value maximization as an ex ante motivation, the optimal specificity assumption is particularly applicable in our analysis.

## **DRIVERS, MALLEABILITY AND BIASES OF ASSET SPECIFICITY PERCEPTIONS**

Setting opportunism aside for now, asset specificity assessment is more complex when considering perceptions. Buyer managers develop individual perceptions of optimal specificity ( $K^*$ ). Internal negotiation, based on managers' influence and self-interest, leads to an aggregated firm-level assessment.<sup>4</sup> When it is moderate, search begins for a supplier viewed as capable of the assessed specific investments (Argyres, 1996). Once selected, supplier managers form their own asset specificity perceptions, based on the buyer's task description, which are also aggregated into a firm-level assessment reflecting supplier managers' interests and influence.

Negotiation then ensues between firm managers and continues until the parties agree on a negotiated specificity assessment, with individual managers' perceptions shifting during this dialogue, reactivating intrafirm aggregation processes. Absent opportunism, this assessment would be intendedly accurate, but likely biased, and would shape contract attributes rather than the optimal specificity level ( $K^*$ ). These intra-firm and inter-firm negotiation processes occur because managers have distinct, inherently malleable, and potentially biased specificity perceptions. Thus, it is necessary to explore the origin of these properties.

### **Distinct but Malleable Asset Specificity Perceptions**

The optimal level of specificity is based solely on maximizing customer WTP, while simultaneously minimizing production costs (Nickerson, 1997). Conversely, managers' perceptions of specificity are shaped by their cognitive frames (e.g., Barr, Stimpert, & Huff, 1992; Kaplan & Tripsas, 2008; Porac, Thomas, Wilson, Paton, & Kanfer, 1995).

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<sup>4</sup> Since our theory assumes boundedly rational managers, who likely have different perceptions of specificity in the exchange (even within the same firm), it is necessary for this intrafirm and interfirm aggregation processes to be based on influence, as described in Kaplan (2008), rather than heuristic decision rules for satisficing (Simon, 1967).

**Buyers and suppliers have distinct perceptions.** Each manager perceives optimal specificity by applying their cognitive frame (Goffman, 1974) constructed from their experience with: 1) prior customers' WTP for exchange output with specific features, 2) cost of production technologies needed to achieve them, and 3) potential future uses with other firms. This experience differs across managers. For example, marketing managers may have more customer exposure, while those in engineering may have more production technology experience. Thus, managers' cognitive frames are distinct within a firm, leading to unique perceptions of optimal asset specificity.

Buyer and supplier managers also tend to have different specificity perceptions based on their divergent experience and knowledge. External suppliers are typically needed when buyers lack capabilities (Argyres, 1996), suggesting supplier managers have comparatively more experience in production technologies and future uses with other customers. Conversely, buyer managers have more experience with their customers, which informs WTP. These diverse experiences suggest buyer and supplier managers' cognitive frames vary systematically, directing attention to different aspects underlying optimal specificity (Ocasio, 1997) and resulting in distinct perceptions.

Buyer and supplier managers also tend to weigh these three aspects differently when forming perceptions (Ocasio, 1997). Buyer managers are likely less focused on future uses since, unlike suppliers, they are not exposed to holdup hazards in discrete transactions. So, they tend to concentrate on focal transaction profitability: current customers' WTP and the cost of production technology. In contrast, supplier managers are concerned about holdup and put more weight on future uses (with other firms) and the idiosyncratic cost of production technology. These different

foci increase the likelihood that buyer and supplier managers have distinct specificity perceptions.

*Proposition 1a. Buyer and supplier managers are likely to have systematically different perceptions of optimal asset specificity, framed by their distinct experiences.*

**Malleability of asset specificity perceptions.** Asset specificity and its underlying characteristics are hard to observe and often based on unknowable information (like future uses with other firms). So, individual managers are inherently uncertain about the accuracy of their own perceptions. This uncertainty is likely to increase when there is variation in managers' perceptions within and between firms. Thus, managers' specificity perceptions tend to consist of both a likely level and an acceptable range, suggesting they are inherently malleable, or open to influence.

When managers in a firm have a lot of experience in one type of exchange, their individual cognitive frames may narrow, leading to smaller ranges of acceptable specificity for this particular type of exchange. When these similar perceptions are shared during an intrafirm negotiation, individual managers' confidence in their own appraisal increases, rendering their specificity perceptions less malleable.

However, when a firm's managers have *more diverse experience* with customers, production technologies or future uses with other firms, their cognitive frames tend to broaden, increasing their ranges of acceptable specificity levels, leading to dissimilar perceptions. When these distinct impressions are shared during an intrafirm negotiation, a manager's confidence in their own perception is likely to decrease, increasing its malleability or capacity to be influenced. Thus, greater diversity of a firm's managerial experience increases specificity perception malleability.

*Proposition 1b: Greater diversity in a firm's managerial experience with customers, production technologies, or future uses is likely to increase the malleability of managers' perceptions of optimal asset specificity.*

### **Systematic Biases Due to Task Novelty and Complexity**

Managers' asset specificity perceptions are not just distinct and malleable, they can also be systematically biased (Tversky & Kahneman, 1973). While there are many sources of potential bias, managers' impressions of task novelty and complexity may, in turn, impact their perception of asset specificity. Thus, exploring this influence on asset specificity perceptions is critical for understanding their indirect manipulation.

Perceived task novelty is unlikely to drive specific investments, as a task unfamiliar to managers may be valued by other buyers and used in future exchanges. Yet, when the task is perceived to be novel, the entire exchange may be viewed through a novelty frame (Turcotte et al., 2021), increasing the likelihood that all aspects of the transaction are interpreted as being specific.

This frame tends to inflate the novelty of product attributes perceived by buyer managers, which in turn increases their impressions of both customer WTP and the need for costly atypical production technologies, bolstering their perception of optimal asset specificity. It may also unconsciously increase supplier managers' perceived novelty of the exchange technology, even when it is conventional. These inflated estimates may, in turn, increase their perception of the buyer's customer WTP. Accordingly, managers' views of optimal specificity are likely to be inflated in both firms because of high perceived task novelty.

Similarly, perceived task complexity does not directly drive specific investment. A task that seems complex is viewed as involving many interdependent steps. While each step may provide

an opportunity for specificity, incorporating it may not be optimal. Yet, managers' perception of greater complexity is likely to invoke an illusion of false-uniqueness (Suls & Wan, 1987).

This illusion likely prompts buyer managers to assume task complexity results from their company's unique needs, which inflates their appraisals of both specific investments and customer WTP, leading to increased perceptions of optimal specificity. Comparably, this false impression tends to lead supplier managers to interpret seemingly complex tasks as being unique, even when they can be applied to future customers. As a result, supplier managers are more likely to view each interdependent step, which may have both general and transaction specific aspects, (Campbell, 1988; Ethiraj & Levinthal, 2004), as more specific to the buyer.

Independent of this false uniqueness illusion, the greater perceived number and interdependence of components may inflate both buyer and supplier managers' specificity perceptions. As perceived complexity strains the limits of information processing, managers gain a stronger impression that idiosyncratic investments are required to complete the task.

*Proposition 1c: Greater perceived task novelty or complexity is likely to inflate managers' perceptions of optimal asset specificity.*

### **MANIPULATING ASSET SPECIFICITY PERCEPTIONS IN DISCRETE TRANSACTIONS**

While the prior discussion was absent opportunism, we now admit it to examine intentional manipulation of specificity perceptions. When opportunism (particularly driven by the motivation for value capture) is considered, intended accuracy of negotiated specificity perceptions can no longer be assumed. Instead, managers are unlikely to reveal their firm's intendedly accurate assessment of  $K^*$ . Rather, they may lobby for a higher (supplier) or lower (buyer) level to capture more value. If they are successful, their counterparts' specificity

perceptions move towards the manipulated value, resulting in a corresponding readjustment to the firm-level assessment. Figure 1 provides an overview of the manipulation process.

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**Insert Figure 1 about here**

Specificity perceptions can be manipulated directly (distorting views of customer WTP, production technology costs or future uses with other firms) or indirectly (shifting perceptions of task novelty or complexity). Yet, to fully understand manipulation, we must: 1) explore when it is possible, 2) examine motivation to manipulate, and 3) understand the risk of its discovery. We begin with discrete transactions where holdup hazards mainly fall on the supplier, but later explore repeated transactions.

### **Perceived Task-Relevant Knowledge Advantage Enables Manipulation**

Although managers may want to influence their counterparts' specificity perceptions to increase their firm's value capture, that may not always be possible. Prior work suggests one party must exert influence over the other to alter their cognitive frame (Benford & Snow, 2000; Kaplan, 2008; Weber & Mayer, 2014). In the case of specificity perceptions, influence arises from a perceived task-relevant knowledge advantage, *a manager's perception that the other firm has comparatively more task relevant knowledge*. While this perception is a boundary condition for manipulation, actual information asymmetry (Akerlof, 1970) is not necessary (Kaplan, 2008).

Typically, buyers and suppliers are perceived to have greater knowledge about different exchange aspects. The supplier is viewed as having more expertise about production technology, since buyers often seek these complementary capabilities (Argyres, 1996), and future uses as they may have other buyers with similar needs. In contrast, buyers are seen as knowing more about their customers' WTP, as they know their customers' needs. The belief that one party has



this *expected knowledge* can be bolstered by visible signals related to it. For example, a supplier with many production technologies (Mayer, Davis, & Schoorman, 1995) or a buyer with many customers is more likely to be perceived to have a knowledge advantage. Yet, this perceived advantage also depends on managers' impressions of their own firm's comparative knowledge. That is, managers targeted for manipulation must view their own firm to have less task-relevant knowledge than that of the manipulating firm for a knowledge advantage to be perceived.

Moreover, when a firm has a reputation for integrity, its managers' claims that their unique knowledge is most relevant for determining optimal specificity are likely to be more persuasive. Given the firm's reputation for integrity will likely remain intact due to the difficulty in discovering manipulation, managers are more likely to draw on relational currency to influence their counterparts' perceptions. In fact, it is likely to make the manipulation more effective, revealing another dark-side of a reputation for integrity (Oliveira & Lumineau, 2019).

### **Manipulation and Value-based Strategy: A Bigger Cut**

Managers' manipulation of their counterparts' specificity perceptions is driven by *net value capture* for their firm. Interestingly, Williamson (1985: 63) himself argues for this motivation, stating that while managers "have a long-term interest in effecting adaptations of a joint profit-maximizing kind, each also has an interest in appropriating as much of the gain as he can." The difference is that he ties this motivation solely to ex post haggling. However, if value capture motivation is applied symmetrically (Foss & Hallberg, 2013), it may also drive managers' ex ante manipulation of their counterparts' asset specificity perceptions.

We can use value-based strategy, which draws on cooperative game theory (Brandenburger & Stuart, 1996; MacDonald & Ryall, 2004), to link manipulation of asset specificity perceptions to value capture. In this approach, each actor is fully rational and knows their potential

contribution in all possible coalitions, creating a bargaining range defined by their opportunity cost. However, the exact value captured within that range depends on bargaining skill.

When this rationality assumption is augmented to allow for cognitive distortions, supplier (buyer) managers may inflate (deflate) their counterparts' perceived asset specificity to capture value. This manipulation impacts value capture in two ways not anticipated in value-based strategy theory. First, it narrows (increases) the field of possible suppliers, as few (many) may appear to have required complementary assets.<sup>5</sup> Eliminating (adding) potential coalitions from consideration alters the bargaining range. Second, manipulation may also shift how managers interpret each firm's unique contributions, altering their coalitional values to directly impact the bargaining range. So, skilled negotiators may intentionally manipulate their counterpart's bargaining range to capture more value, which is a key departure from value-based theory.

### **Why Manipulation is Unlikely to be Discovered**

Yet despite opportunity and motivation, if manipulation is easily discovered, the potential cost of transaction termination or reputational damage is likely to deter it. However, drawing on our earlier discussion, manipulation is unlikely to be detected for three reasons.<sup>6</sup> First, managers' perceptions are malleable allowing for influence within an acceptable range. Second, the intrafirm aggregation process creates expectations that firm-level assessments are negotiated, so managers are receptive to adjusting their perceptions. Finally, specificity perceptions may be indirectly manipulated by distorting views of task novelty or complexity, further insulating against detection.

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<sup>5</sup> This mechanism is distinct from Williamson's (1985) argument for a small number of suppliers based on the development of asset specificity from working with the partner.

<sup>6</sup> Discovery is likely in two traditional contracting approaches, incomplete contracting theory (ICT) and TCE due to their unrealistic cognitive assumptions. Under ICT, information asymmetry is anticipated and addressed ex ante in contracts (Klein, Crawford, & Alchian, 1978), requiring full rationality. In TCE, foresight allows for accurate determination of optimal specificity in the long-term, so manipulation would likely be discovered. Our augmented bounded rationality assumption and value maximization motivation allow for manipulation and obscure discovery.

Additionally, perceptual manipulation is a covert opportunistic behavior, which is harder to detect since the party's detrimental actions and intentions are shrouded (Oliveira & Lumineau, 2019). Even when disconfirming evidence is revealed, the manipulating managers' assertions may be attributed to the great uncertainty around the specificity level rather than deception. Manipulating managers may also use deliberate tactics to avoid negative attributions, such as suggesting new information emerged over time. They may also downplay disconfirming information by refocusing the manipulated managers attention on peripheral information that maintains ambiguity. Both actions may be perceived as reducing information asymmetry, making an attribution of intentional manipulation unlikely. Thus, managers may sustain the manipulation (possibly even beyond the focal transaction), while avoiding reputational damage.

#### **IMPLICATIONS FOR CONTRACTUAL GOVERNANCE AND VALUE CREATION**

Having established when manipulation is likely, we turn to its impact on contract design, focusing on differences from extant predictions based on optimal specificity. As discussed, perceptions can be directly manipulated by influencing counterparts' views of customer WTP, production costs or future uses. In contrast, they may be indirectly manipulated by influencing managers' views of task novelty and complexity. Both approaches may impact task detail and contract clause inclusion in particular ways.

##### **Manipulation Increases Task Detail**

Task detail in contracts includes specifications of the deliverable. Contract design research based on traditional TCE argues asset specificity and task complexity drive the inclusion of greater task detail (Das & Teng, 1996), while task novelty tends to reduce it (Mayer & Argyres, 2004). However, we predict that manipulation of specificity perceptions has a separate, and sometimes surprising effect, on the level of task detail included in the contract.

**Supplier manipulation.** Supplier managers inflate their counterparts' specificity perceptions to increase the price without making additional specific investments. As such, they want to clearly specify the deliverable by increasing task detail in the contract, while convincing buyer managers an inflated specific investment is needed to produce it. When buyer managers receive the deliverable stipulated in the contract, they tend to assume the inflated specific investment was made. Moreover, delivering the exact output in the contract satisfies the supplier's legal obligation if questions arise. Thus, supplier managers' direct and indirect inflation of their counterparts' specificity perceptions increases task detail.

**Buyer manipulation.** In contrast, buyer managers seek higher specificity at lower prices. So, buyer negotiators want supplier managers to perceive limited specific investments are called for, even as substantial specific investments are ultimately needed (to meet the buyer's firm-level assessment of optimal specificity). To achieve this, buyer managers increase task detail in the contract to codify the exact deliverable and focus the ex post dialog on its details. While supplier managers must make a higher specific investment than they anticipated, they may be distracted by focusing on the deliverable, not noticing the specific investment. Moreover, they may assume they were mistaken about the specificity level due to the uncertainty around it ex ante. Furthermore, in the unlikely event supplier managers become aware they made a greater specific investment than expected, they are still legally required to deliver the output as specified. As such, the relationship between direct and indirect buyer managers' manipulation of specificity perceptions and greater task detail is counter to prior predictions based on optimal specificity.

*Proposition 2a. All else equal, direct or indirect manipulation of asset specificity perceptions away from the optimal level is likely to increase the inclusion of contractual task detail.*

## **Supplier Manipulation and Contractual Clauses**

**Direct manipulation.** In a discrete transaction buyer holdup of the supplier is the most critical hazard. When supplier managers inflate their counterparts' specificity perceptions, buyer managers perceive an increase in the likelihood of holdup. So, buyer negotiators anticipate additional control clauses (e.g., bonuses, penalties) to protect the supplier, consistent with extant theory. Conversely, supplier negotiators know additional protection is unnecessary. Yet, to increase the validity of their manipulation, they may seek symbolic or superfluous control clauses, without adding substantial costs. For example, they might add a high-level termination clause that appears to safeguard against buyer holdup, fully knowing it will not be invoked. As a result, direct supplier manipulation increases use of control clauses.

**Indirect manipulation.** Supplier managers may also pursue indirect manipulation to increase specificity perceptions, resulting in a more complex and less intuitive impact. When they increase perceptions of task novelty or complexity, the anticipated information needs rise, increasing the use of coordination mechanisms (roles and responsibilities, reporting, etc.). However, the increased task novelty and/or complexity perceptions also inflate buyer managers' views of specificity. Since asset specificity is positively related to control clause inclusion, their use also increases, which is not predicted by prior theory.

Again, supplier managers know the added control clauses are not actually needed. However, if they do not request some level of protection to match the inflated specificity level, buyer managers may not be convinced, lowering the credibility of the manipulated specificity assessment. As a result, supplier managers may only request superfluous control clauses to

convince the buyer while keeping unnecessary governance costs down. This inclusion of superfluous control clauses is a departure from governance predictions in extant theory

*Proposition 2b. All else equal, direct or indirect inflation of buyer asset specificity perceptions above the optimal level is likely to increase contractual control mechanisms.*

### **Buyer Manipulation and Control Clauses**

**Direct manipulation.** While supplier manipulation increases the perceived need for control clauses, the opposite is true when buyer managers directly deflate their counterparts' specificity perceptions. Since these safeguards primarily protect the supplier, excluding them tends not to put the buyer at risk. Furthermore, suppliers are unlikely to perceive the need for protection. Thus, buyer manipulation decreases the inclusion of control clauses, while simultaneously and covertly increasing supplier exposure to the risk of holdup.

**Indirect manipulation.** When buyer managers deflate supplier managers' impressions of task novelty or complexity, coordination clauses may decrease as the task is perceived to be simpler or more familiar. However, deflating these perceptions also tends to decrease views of optimal specificity, reducing the use of control clauses. This prediction deviates from prior contract design theory, which does not link novelty or complexity to the use of control clauses.

*Proposition 2c. All else equal, direct or indirect deflation of supplier asset specificity perceptions below the optimal specificity level is likely to decrease contractual control mechanisms.*

### **Possible Extreme Value Creation and Capture Outcomes**

Because managers from both firms must negotiate an assessment of optimal specificity, the act of manipulating specificity perceptions does not increase negotiation costs. That is, instead of offering the firm-level assessment of optimal specificity in the negotiation, the manipulating

party merely offers their firm's desired level instead. This substitution does not significantly alter the negotiation process, suggesting that it is not more costly due to manipulation.

Conversely, the result of this manipulation has the potential to destroy value. TCE assumes identification of an optimal asset specificity level (Riordan & Williamson, 1985) and the efficient governance choice to maximize net value creation. Yet, manipulated asset specificity perceptions, linked to self-interested value capture, suggest managers may deviate from optimal exchange attributes. This may suggest some extreme value creation and capture scenarios.

**Sub-optimal value creation.** Sub-optimal value creation may occur for several reasons. First, as predicted, manipulating asset specificity perceptions may increase governance costs. When buyer managers deflate their counterparts' perceptions of asset specificity, the contract may contain inadequate safeguards to protect the suppliers. Thus, haggling costs may occur, destroying exchange value. Additionally, if suppliers inflate their counterparts' perceptions of asset specificity and include costly control clauses, they will destroy value. However, the second scenario is less likely since supplier managers understand the additional control clauses are merely to support the illusion of higher specificity and will seek less costly symbolic safeguards.

Manipulation may also reduce value creation by shifting specific investment away from the optimal level ( $K^*$ ). Manipulators do not want to deviate from their perceived optimum (their intendedly accurate firm-level assessment), so as predicted, they increase task detail to codify this desired level. However, if the task detail is insufficient, actual specific investments (not just perceptions) may shift from the desired level. This is more likely when buyer negotiators manipulate, as supplier managers are able to deflate specific investments to match their perceptions of the optimal specificity level.

Although unlikely, the discovery of intentional manipulation can lead to conflict, which may also destroy value as renegotiation may increase haggling and contracting costs, consistent with incomplete contracting theory (Hart & Moore, 1988) and TCE (Williamson, 1985). In the extreme, conflict can lead to arbitration or lawsuits (Delios & Beamish, 1999; Lumineau & Oxley, 2012), as in our Oxford example. In a lawsuit, manipulating managers may prevail if the task detail reflects what was produced, as courts typically look to the formal contract. Despite a possible legal victory, however, their reputation may be harmed.

Finally, inflated perceptions of asset specificity may drive unnecessary vertical integration or cut off repeated transactions unnecessarily. That is, a buyer may avoid a hybrid transaction altogether and vertically integrate even though optimal specific investments ( $K^*$ ) would suggest this is inefficient. Alternatively, if the hybrid transaction occurs, the supplier may unintendedly inflate specificity perceptions to the point of over-appropriation (claiming more value than was created) as Garcia-Castro and Aguilera (2015: 142)<sup>7</sup> suggest. As such, the buyer loses money, reducing the likelihood of repeated transactions with the supplier, despite a positive *joint* net value. All these factors suggest manipulation is likely to reduce net value creation compared to extant TCE theory. Yet, it may not be surprising that our more realistic bounded rationality assumption may reduce net value creation compared to predictions based on an optimal specificity level.

**Supplier manipulation may not destroy value.** More surprising, however, is that it may be possible to manipulate perceptions and create the same joint net value, while only shifting value

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<sup>7</sup> Using the value creation and appropriation model, an empirical complement to value-based strategy, Garcia-Castro and Aguilera (2015: 142) identify the possibility that “*one stakeholder appropriates value in excess of the total value created*” – so the other stakeholders actually lose value. They suggest over-appropriation is a miscalculation due to cognitive limitations. This may occur in specificity perception manipulation, given the great uncertainty around the optimal specificity and the value it produces in the exchange.



capture. When supplier negotiators have conducted similar transactions, they may have accurate perceptions of optimal specificity. Yet, they may still convince buyer managers the transaction is novel, complex and/or requires specific investments. If the transaction is less routine for buyer managers, they may adjust their perceptions, not realizing the supplier can deliver without substantial specific investments. Since the supplier can produce the desired output, even if buyer managers perceive it requires substantial specific investments, value creation is maximized but the supplier gains a larger share. Since buyer managers often perceive the supplier has a production technology knowledge advantage, this may be the most common manipulation context.

Under these circumstances, supplier negotiators may be strategic in adding safeguards to boost their manipulation validity. Since supplier managers know they can deliver the specified output, they may propose a bonus clause with less guaranteed payment and more delivery-contingent payment, or stiff penalties for non-delivery. Buyer managers are likely to view these clauses favorably, leading to negligible negotiation costs, and thus preserving the value created.

*Proposition 3a: All else equal, supplier manipulation of asset specificity perceptions is likely to maximize net value, when the supplier has a real task-specific knowledge advantage.*

**Buyer manipulation may increase net value above the maximum.** Although much rarer, buyer managers may also have fairly accurate specificity information from similar transactions with other suppliers. In this case, buyer managers may deflate their counterparts' perceptions of specificity, while increasing task detail to ensure the optimal specificity is delivered. Unlike supplier manipulation, however, this decreases the use of control clauses, lowering governance costs. As long as the buyer does not hold up the supplier, increasing haggling costs, the

manipulation may create more net value than under the optimal specificity level (due to decreased governance costs), with the buyer taking a larger share of it.

*Proposition 3b: All else equal, buyer manipulation of asset specificity perceptions is likely to increase net value above the maximum under optimal specificity, when the buyer has a real task-specific knowledge advantage and does not holdup the supplier.*

## **MANIPULATION IN REPEATED TRANSACTIONS**

While we previously focused on discrete exchanges, we now turn to repeated transactions. One important distinction is we now include relationship-specific investments (Dyer & Singh, 1998) in addition to transaction-specific investments (Williamson, 1985), as future use involve exchanges with the same firm. Repeated transactions pose somewhat different hazards and rely on trust to a differing degree than discrete transactions. Moreover, they allow for differential duration of perceived task-relevant knowledge advantages. In the following, we predict that suppliers are more likely to manipulate than buyers in repeated exchanges

### **Manipulation is Possible in Repeated Transactions**

It is first important to establish whether manipulation is possible in repeated transactions, as prior research suggests that both double-sided hazards (Williamson, 1983) and trust development (Dyer & Singh, 1998) mitigate opportunism. However, we examine why this is not the case for manipulation of specificity perceptions and suggest a positive relationship between trust and manipulation in repeated transactions.

**Two-sided holdup hazard bolsters repeated transactions.** Our previous discussion of discrete transactions assumes the supplier is primarily at risk of holdup. In contrast, repeated transactions with specific investments may reflect a bi-lateral monopoly. Once the supplier

invests in relationship-specific assets, the buyer cannot easily move to other vendors, thus both parties are less likely to behave opportunistically (Williamson, 1983).

However, when manipulation of specificity perceptions is considered, managers may be able to exploit this symmetry instead. For example, successful inflation of buyer managers' specificity perceptions in the initial exchange may lead to a higher output price. In repeated exchanges, supplier managers may seek to "protect" their investment and that of the buyer by including a control clause that locks in this (higher) price. That is, they may disguise this clause as a safeguard for their firm's specific investment and as protection for the buyer from future price hikes. Yet, they may really use it to continue to manipulate their counterparts' perceptions of specificity and lock in the higher price across repeated transactions. Thus, even the two-sided holdup context of repeated exchanges is unlikely to mitigate on-going manipulation.

**Trust facilitates repeated manipulation.** It is also important to consider the impact of trust on manipulation, as prior research suggests it mitigates opportunism in repeated exchanges (Dyer & Singh, 1998). We suggested a reputation for ability supports the perception of a task-relevant knowledge advantage. A reputation for integrity also enhances manipulating managers' influence. However, Mayer et al. (1995) identify three types of trust (ability, integrity, and benevolence). While the first two are easily supported by reputational signals, benevolence trust emerges from working closely over time (Gulati, 1995). Thus, we argue benevolence trust, rather than a reputation for integrity or ability, is critical in repeated transactions.

Benevolence trust is "the extent to which a trustee is believed to want to do good to *the trustor*, aside from an egocentric profit motive" (Mayer et al., 1995: 718). This "perception of a positive orientation of the trustee toward the trustor" (1995: 719) develops when the trustee is

perceived to be loyal, open, receptive, or available (Butler, 1991). Yet, manipulating managers may appear to display these attributes, while shifting their counterparts' specificity perceptions. In fact, during negotiations, the manipulating party may be seen as providing their knowledge to reduce the other party's uncertainty, which may be perceived as a benevolent gesture.

One might imagine the discovery of on-going manipulation deteriorates benevolence trust. We agree that if this occurs, manipulated managers may have a strong negative affective response such that trust may be permanently lost (Elangovan & Shapiro, 1998). However, similar to discrete exchanges, the discovery of covert opportunism, such as specificity perception manipulation, is unlikely (Oliveira & Lumineau, 2019). Again, it is not enough for disconfirming evidence to arise. Instead, benevolence trust is only degraded if the manipulated managers attribute the discrepancy to their counterparts' intentional actions (Weber & Bauman, 2019).

However, attribution of intentionality is likely to be colored by managers' trust in their partner's benevolence. That is, the manipulated managers' trust in their counterparts is likely to frame their motives in a positive light (Weber & Mayer, 2011). Moreover, it is hard to confirm intentionality with certainty – particularly when the partner is perceived to have a knowledge advantage. Thus, it is less likely that manipulated managers will make an internal attribution for the inaccuracy to their counterparts. Rather, they may attribute it to the on-going uncertainty around asset specificity, as often it is not obvious even ex post (Joskow, 1988). For example, if investments framed to the buyer as specific were later leveraged into products for other supplier customers, it may not be obvious to buyer managers that the opportunity was anticipated. This leaves room for doubt that there was an intentional intent to deceive. Thus, this inconsistency is likely to be interpreted as an honest mistake and would not disrupt the ongoing relationship.

Indeed, in our opening example, it would appear that Oxford's relationship was not disrupted extensively by the whistleblower case even though the university lost in court– the relationship has continued many years since this revelation. Upon losing the case, an Oxford representative maintained that they did not intentionally mislead and emphasized their unique expertise as a reason for the continued relationship:

“We refute any allegation that the Cabinet Office was misled about the design and content of this bespoke programme. We are proud to continue to work with the Cabinet Office, and of the superb work of our faculty and staff in delivering world-class executive education to all our clients.” (Higgins, 2021)

While benevolence trust is harder to establish, it is also durable to the extent that a trusted partner is perceived to have earned it (Mayer, et al., 1995). As such, it is likely to remain intact, supporting the on-going relationship and allowing the manipulation to be sustained, consistent with the dark side of trust (Oliviera & Lumineau, 2019). Accordingly, benevolence trust not only supports supplier manipulation, but is also associated with repeated exchanges.

### **Duration of Perceived Task-Relevant Knowledge Advantages**

Now that we have established that bilateral specificity and benevolence trust are unlikely to deter manipulation in repeated exchanges, we turn to the persistence of perceived knowledge advantages, a boundary condition for manipulation. A supplier's perceived knowledge advantage arises from buyer managers' beliefs the firm has substantial task-relevant experience. As the exchange is repeated, and the supplier delivers the agreed upon output, this perception is bolstered. In fact, this perception is only likely to change if the buyer invests in tapered integration to duplicate the supplier's capabilities (Parmigiani & Mitchell, 2009). However, tapered integration is costly, suggesting that an erosion of the supplier's perceived knowledge advantage is unlikely.

In contrast, a buyer's perceived task-relevant knowledge advantage primarily stems from the supplier managers' views that the firm has knowledge about potential future uses for the focal assets within their own firm or with its customers. However, as the partners repeat the transaction, more of this information is revealed, reducing the perception of a buyer knowledge advantage. Thus, supplier managers may be much more able to manipulate their counterparts in repeated exchanges, while buyer managers may only distort supplier negotiators' perceptions in an initial exchange<sup>8</sup>.

*Proposition 4: All else equal, supplier manipulation of asset specificity perceptions is more likely in repeated exchanges than buyer manipulation.*

#### **DISCUSSION: ASSET SPECIFICITY MANIPULATION CONTRIBUTIONS AND RESEARCH OPPORTUNITIES**

Asset specificity, TCE's central independent variable, creates a risk of holdup underlying efficient governance predictions (Riordan & Williamson, 1985), which drives the inclusion of control clauses (safeguards) in contracts (Dyer, 1997; Poppo & Zenger, 2002; Reuer & Ariño, 2007). While the empirical TCE literature acknowledges asset specificity is hard to observe, and is often based on perceptions, the ramifications of these cognitions have not been fully incorporated into theory. We argue this omission stems from an implicit assumption of foresight that, on average, managers anticipate hazards and adopt efficient governance. Williamson's deliberate focus on information limitations, but not cognitive distortions, also draws scholarly inquiry away from incorporating perceptions. As a result, extant theory does not account for distinct perceptions of asset specificity, their malleability, or the possibility of their manipulation.

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<sup>8</sup> Although unintentional manipulation to the point of over-appropriation may temper any one buyer's participation in repeated exchanges with a particular supplier, suppliers are still much more likely to be able to manipulate in repeated exchange than buyers.

Yet as we illustrate, these aspects of asset specificity perceptions substantially impact governance predictions and critical outcomes.

### **Contribution: Anticipating Deviations from Classic Predictions**

Our analysis makes three contributions to the governance and contract design literature. First, we augment contract design research by addressing the critique of foresight (Moran & Ghoshal, 1996). In particular, we investigate how perceptions of optimal transaction-specific investment emerge absent opportunism, why they differ across firms, and their potential biases and anticipated shifts during negotiations. Second, we contribute to the microfoundational theory of contract design by investigating how the ex-ante pursuit of value may lead to intentional deviation from efficient contracting predictions. In particular, we show that TCE's classic contracting predictions are altered when managers are motivated to influence perceptions of specificity. Finally, we identify how transaction outcomes may differ from prior theory regarding value creation and value capture. Overall, we expect that, in some cases, manipulation of specificity perceptions will not destroy value and may even be consistent with repeated transactions. We explore each of these in more detail below.

**Forming and changing perceptions.** First, absent opportunism, buyer and supplier managers' specificity perceptions are likely to systematically differ. Since perceptions arise from cognitive frames composed of accumulated experience, managers in buyer and supplier firms inevitably have divergent views of specificity. Even if they all attend to the same factors (customer WTP, production technologies, and future uses), their distinct frames give more or less weight to each of these aspects, resulting in different specificity perceptions. Furthermore, these perceptions are inherently malleable, as they consist of an acceptable range and likely value of

optimal specificity. Thus, they are open to influence in the intrafirm aggregation process and the interfirm negotiation. So, when firms negotiate, managers' perceptions evolve until there is agreement on the perceived optimal specificity level. Even in the absence of opportunism, the intrafirm and final assessments of these attributes must be understood as an outcome of multiple negotiations. Finally, specificity perceptions can be systematically biased by managers' views of other transaction attributes, most notably task novelty and complexity.

More broadly, the formation and potential bias of perceptions of task characteristics is also likely to impact work in incomplete contracting theory (ICT) (Hart & Moore, 1988). This approach assumes rationality, so buyer and supplier managers have the same optimal assessment of task characteristics. However, if perceptions are added to ICT, models of optimal contracts would have to take differences in buyer and supplier views of transaction characteristics, negotiation of a shared assessment, and potential bias into account.

Moreover, the process of negotiating transaction characteristic assessments can augment Simon's (1967) discussion of satisficing. While most work in this area focuses on heuristics (Gigerenzer & Goldstein, 1996), we suggest that negotiation of perceptions within and between firms is a different approach to satisficing that has not been considered in the governance literature.

**Contract design.** Second, when we apply Williamson's (1985) value capture motivation symmetrically, managers' attempts to influence their counterparts' perceptions may alter some traditional TCE predictions. We theorize manipulation may only be successful if the manipulating firm has a perceived knowledge advantage (bolstered by a reputation for ability). This influence can also be augmented by a firm's reputation for integrity. Given such influence,



managers may directly manipulate their counterparts' specificity perceptions or do so indirectly by distorting their views of novelty or complexity. These manipulated perceptions likely alter key contract design elements predicted in prior theory. For example, inflating specificity perceptions increases the use of control clauses beyond predictions in prior theory based on optimal specificity levels. Increasing perceptions of specificity may also increase task detail even when prior theory would predict less (e.g., when tasks are perceived to be highly novel). This deviation from efficient contract design may be intentional in the pursuit of net value capture.

The manipulation of perceptions may also impact other literature. First, incorporating manipulated perceptions into ICT (Hart & Moore, 1988) will likely drastically change its predictions. In this approach, information asymmetry is anticipated and addressed ex ante in contracts (Klein, Crawford, & Alchian, 1978). However, discovery of covert perception manipulation is unlikely, making it difficult to anticipate and address in optimal contracts. Moreover, the incorporation of perceptions may have a significant impact on empirical governance and contract design studies. In prior work, specificity is often measured by surveying one party in the exchange (e.g., Reuer & Ariño, 2007). However, this only provides one firm's assessment of optimal specificity. Instead, empirical studies should potentially strive to measure both firm's assessments. Additionally, measuring specificity using a survey operationalizes optimal specificity as perceptions of optimal specificity. Absent opportunism, there would be little difference between these concepts, as managers strive to be intendedly accurate in their impressions. However, when value maximization is considered, there is likely a mismatch in the theoretical predictions used in the studies (based on optimal specificity) and the empirical results based on perceptions. Thus, the influence of specificity perception manipulation should be considered in future empirical studies.

**Distinct outcomes.** Finally, we offer distinct predictions for how manipulation impacts transaction outcomes such as value creation, value capture, and repeated transactions. Lower value creation may seem likely given that supplier manipulation may increase governance cost and buyer manipulation may lead to suboptimal specificity. Moreover, manipulation in repeated transactions may seem unlikely given potential frictions, dual specificity, and the development of benevolence trust. Yet, we suggest that under certain circumstances supplier manipulation may create full net value, while buyer manipulation may actually inflate net value (delivering optimal specificity while lowering governance costs). Additionally, we argue manipulation in repeated transactions is likely because manipulation discovery tends not to occur, and dual specificity can be used to prolong manipulation. Also, if disconfirming evidence emerges, manipulating managers tend to be given the benefit of the doubt due to benevolence trust development. However, suppliers are more likely than buyers to continue manipulation in repeated transactions, due to their sustained perceived knowledge advantage.

As discussed previously, the impact of manipulated perceptions has a direct impact on the value-based strategy approach (Brandenburger & Stuart, 1996; MacDonald & Ryall, 2004). In particular, manipulation of transaction characteristic perceptions changes the bargaining range, which is fixed in this approach. Thus, we proposed these models should attempt to incorporate these alterations, leading to different value predictions.

### **Generalizability of the Theory**

While we focus primarily on manipulation in buyer-supplier exchanges, this theory is applicable in a much broader context. Manipulation of asset specificity perceptions can occur in any hybrid exchange in which there is a possibility of specific investment, and differences in

perceived complementary expertise. For example, manipulation of specificity perceptions may occur in R&D alliances, joint ventures, or even multi-party alliances.

### **A Map for Empirical Exploration**

Our analysis suggests a significant program for future work to better understand how unintentional and intentional distortion of specificity perceptions may impact contractual governance, value creation, and value capture. These opportunities fall into five areas of inquiry: 1) the development and malleability of asset specificity perceptions, 2) their distortion, 3) when manipulation is likely and when it may be discovered, 4) how manipulation impacts contract design and outcomes such as value creation and capture or repeated transactions, and 5) implications for contracting capabilities. Since our analysis investigates perceptions of transaction attributes, testing predictions will require empirical methods that examine induction of perceptions, suggesting that experiments, in-depth case studies and text analysis may be useful.

**Development and malleability of asset specificity perceptions.** Our analysis suggests buyer and supplier managers' perceptions of asset specificity arise from different cognitive frames. Buyer managers focus on their customers' WTP and the cost of production technologies they know well, while supplier managers draw comparisons to production technologies they used previously and whether their firm will be able to use it in other transactions. We propose two alternatives for testing this proposal. First, as in Tripsas and Gavetti (2000) study of Kodak, an in-depth case study could be done of an exchange, in which intrafirm meetings are transcribed, allowing individual managers' initial asset specificity perceptions in each firm to be identified.

Alternatively, an experiment could put participants in the role of a supplier, who must assess the optimal specific investments in a project. They would be given an interactive graphic containing spatially distant information that might help to calculate optimal specificity (customers' WTP, production technology costs, similarity to prior transactions), and extraneous data. They would then provide their perception of specificity (e.g., Likert scale). The time participants spend on each piece of information quantifies attention, which may predict their perceptions. Similar methods could be used to explore perception malleability by providing new information after the initial assessment or having participants negotiate, and measure changes in their impressions.

**Unintentional distortion of asset specificity perceptions.** We also predict perceived task novelty and complexity may inflate perceptions of asset specificity. A scenario experiment may present an exchange designed to reflect a low level of asset specificity, while varying indicators of task complexity and novelty. Participants would then assess their perceived optimal transaction-specific investments (e.g., Likert scale), which would be compared across treatment conditions.

**Impact of manipulation on contract design.** We also suggest manipulation will likely affect contract design. While direct influence of asset specificity tends to alter the likelihood of including control clauses, the more interesting prediction is tied to indirect manipulation, influencing perceptions of task complexity and novelty. To test these predictions, we could survey supplier managers<sup>9</sup>, asking them to provide a contract in which they manipulated their counterparts' perceptions of specificity, and use text analysis of statements of work to assess the

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<sup>9</sup> Casual conversations with supplier managers in the IT industry revealed that they view manipulation of specificity as smart negotiation, so they are likely to share these insights with researchers.

negotiated specificity, task novelty and complexity assessments. We could then code the inclusion of control and coordination clauses using existing scales (Reuer & Ariño, 2007) in adapting Parkhe's (1993) complexity measure). Simultaneously, we could collect intendedly accurate perceptions of these characteristics (perceptions of Williamson's optimal task characteristic levels) from these managers and ask them to indicate the control and coordination clauses they would remove from the contract absent this manipulation. Measures of perceived task novelty and complexity could be used to predict control and coordination clauses in the contract. These predictions can finally be compared to those based on intendedly accurate characteristics.

We also predict manipulation of perceptions of transaction attributes (asset specificity, novelty, or complexity) affect task detail in contracts. The level of detail could be coded by assessing the number of words or categories addressed by the clauses or text analysis might assess language complexity. Again, we could use the level of perceived task complexity and novelty to test task detail predictions, as well as collect information from manipulating managers to provide a contrast to intendedly optimal assessments.

**Manipulation and contracting capabilities.** Contracting capabilities reflect a learning process and are thus a source of firm heterogeneity (Argyres & Mayer, 2007; Mayer & Argyres, 2004; Mayer & Salomon, 2006). One possible link between capabilities and manipulation is that managers in firms with contracting capabilities could be expert manipulators – able to prevent discovery and adept at including task detail to assure the desired output. In this way, they may maintain strong firm reputations despite exploiting manipulation opportunities.

In contrast, contracting capabilities might help firms avoid manipulating out of concern it could damage their reputations. In this way, they may be especially trustworthy. A related question is whether a contracting capability may help managers avoid being manipulated. By definition, a contracting capability suggests the firm would be able to identify and safeguard against such potential hazards.

These are open questions worthy of inquiry. Like all research in this area, the challenge begins with measuring the construct of capabilities. They might be operationalized as contracting experience, inclusion of appropriate safeguards in prior contracts, or whether legal is in-house or outsourced. Then one might assess manipulation attempts using some of the contract coding methods described earlier – such as unusual amounts of task detail.

## **Conclusion**

This microfoundational approach melds TCE with cognition in a novel way. The theory embraces symmetric application of an augmented bounded rationality assumption and net value capture motivation. We incorporate perceptions of transaction attributes, their malleability and manipulation into contract design theory to predict transaction outcomes including contractual governance, value creation and capture – leading to altered predictions from extant theory. This analysis also has intensely practical implications as negotiators actively manage perceptions of specificity. Thus, there is a trove of practical experience and anecdotal evidence to drive this research agenda forward.

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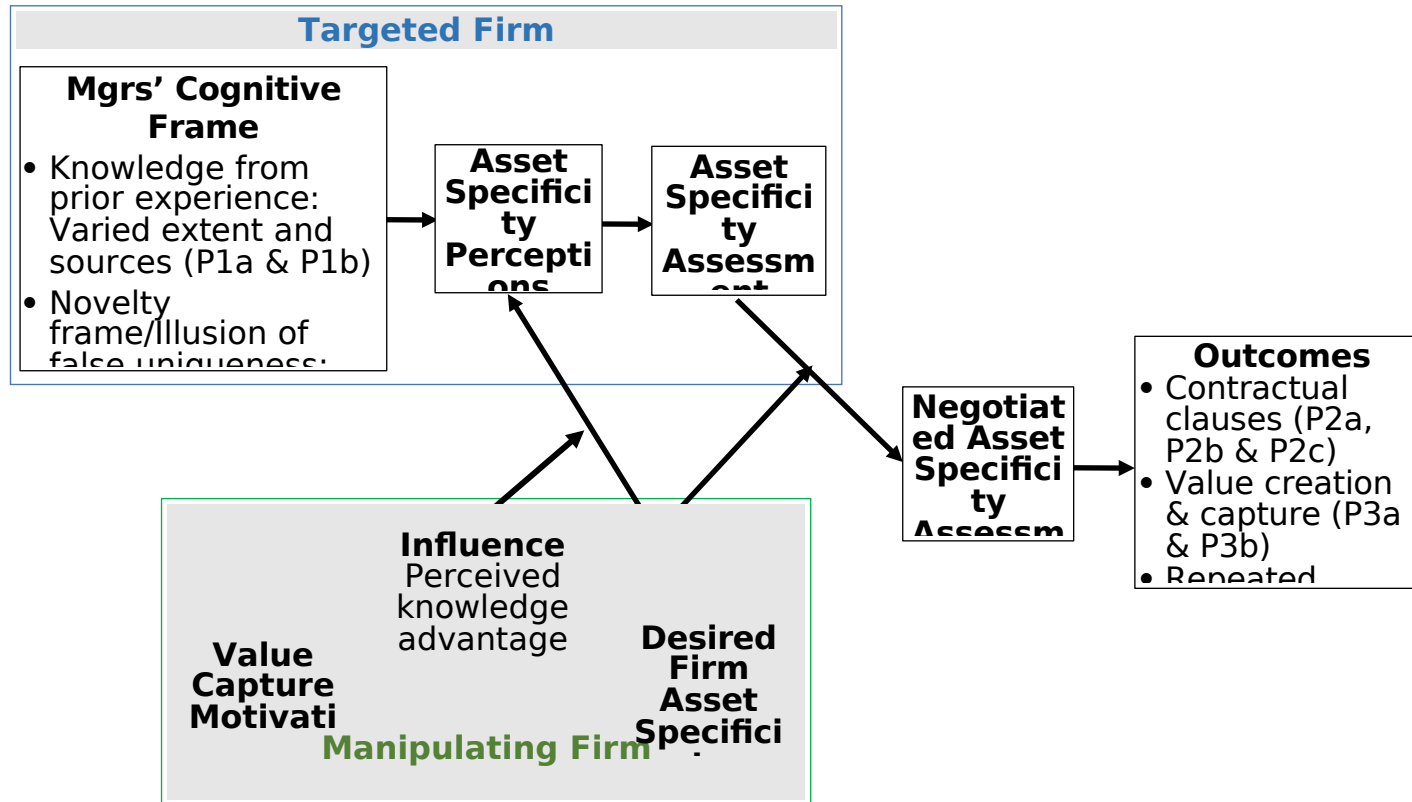
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Figure 1. Manipulation of Perceptions & Impact on Contractual Governance & Value Creation



## **Biographical Sketches**

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