# VALUE CREATION TENSION IN COOPETITION: VIRTUOUS CYCLES AND VICIOUS CYCLES

TADHG RYAN-CHARLETON
Lecturer (Assistant Professor),
Queen's Management School,
Queen's University Belfast,
Northern Ireland.
email: t.ryan-charleton@qub.ac.uk

&

DEVI R. GNYAWALI
Department Head and R.B. Pamplin Professor,
Pamplin College of Business,
Virginia Tech,
Blacksburg, Virginia.
email: devi@vt.edu

Forthcoming in ***Strategic Management Review***

**Keywords:** coopetition, tension, interplay of competition and cooperation, value creation.

**Acknowledgement:** We thank guest editors of the *Strategic Management Review* Coopetition Special Issue, Paavo Ritala and Giovanni Battista Dagnino, and an anonymous reviewer, for helpful comments. Earlier versions of the paper were presented at an SMR Special Conference hosted by the University of Rome LUMSA in 2019 and the 2021 Annual Meeting of the Academy of Management. The first author gratefully acknowledges support from the University of Otago.

# VALUE CREATION TENSION IN COOPETITION: VIRTUOUS CYCLES AND VICIOUS CYCLES


## Abstract

Intent to create value is the raison d'être for participation in coopetition, but the complexities and challenges of value creation are poorly understood relative to other areas of the coopetition literature. Our essay highlights how simultaneous efforts to pursue firm value creation and joint value creation leads to challenges and unique tension in coopetition. We develop the concept of ‘value creation tension’ to explain how efforts towards firm value creation in coopetition can undermine joint value creation and vice versa. We also demonstrate how such tension manifests in challenges faced by managers, in terms of cognition, behaviour, and emotion. Drawing from the paradox literature, we suggest that attempts to resolve, manage, or manipulate tension may reinforce the positives, leading to virtuous cycles, or negatives, leading to vicious cycles. Our essay offers foundations for addressing a critical but currently underexplored tension in coopetition; offering avenues for future research within and beyond the coopetition literature.

**Value Creation Tension in Coopetition: Virtuous Cycles and Vicious Cycles**

## 1. Introduction

One of the central questions of strategic management is why some firms achieve superior performance and others do not (Leiblein & Reuer, 2020; Peteraf, 1993; Porter, 1985). One set of answers lies in firm's ability to create value (Brandenburger & Stuart, 1996)—either alone or through relationships with other firms such as buyers, suppliers and competitors (Dyer & Singh 1998; Gulati *et al.*, 2012; Hamel, 1991). Relationships with competitors have garnered considerable scholarly attention in recent years (Czakon *et al.*, 2020; Gernsheimer *et al.*, 2021; Hoffman *et al.*, 2018) because they help to create value (Estrada & Dong, 2020; Ritala & Hurmelinna-Laukkanen, 2013). Literature on coopetition—defined as simultaneous competition and cooperation among firms with value creation intent (Gnyawali & Ryan Charleton, 2018)—suggests that firms may achieve unique and beneficial outcomes that could not be created alone (Bengtsson & Kock, 2000; Ritala & Hurmelinna-Laukkanen, 2018) through joint value creation and firm value creation (Gnyawali & Ryan Charleton, 2018; Rai, 2016). Exemplar cases of coopetition, such as the S-LCD venture between Sony and Samsung (Gnyawali & Park, 2011), illustrate how value creation intent motivates firms to pursue coopetition, despite considerable risks and challenges.

Prior studies, such as those by Ritala and Hurmelinna-Laukkanen (2009), Bounckenet *al.*(2019: 2020), and Ritala and Tidström (2014), have illuminated the unique nature of value creation in coopetition and the pressures that arise when partners are also competitors. This research has emphasized tension due to simultaneous competition and cooperation (e.g.,Ansari *et al.*, 2016; Bengtsson *et al.*, 2016;Gnyawali et al, 2016; Raza-Ullah, 2020; Ritala & Hurmelinna-Laukkanen 2009; Ritala &Tidström, 2014) and has offered suggestions for managing competition-cooperation tension, such as separation (Bengtsson & Kock, 2000), integration (Chen, 2008; Das & Teng, 2000a; Gnyawali *et al.*, 2016), and co-management (Le

Roy & Fernandez, 2015).However, the tension *within* value creation has received scant attention in the coopetition literature. While intent to create value is the reason why firms engage in coopetition (Czakon *et al.*, 2020; Gnyawali & Ryan-Charleton, 2018), we know less about opposing elements within value creation, and how these might impact overall coopetition results.

Our essay focuses on tension within value creation in coopetition—henceforth value creation tension—which is distinct from tension due to simultaneous competition and cooperation. Tension refers to strain experienced by partners in coopetition (Das & Teng, 2000a; Gnyawali *et al.*, 2016) and value creation tension is driven by the oppositional nature of firm value creation, which involves reciprocal exchanges and the pursuit of firm goals, and joint value creation, which involves deep engagements and the pursuit of shared goals. This tension is paradoxical in nature because firm value creation and joint value creation are "…contradictory yet interrelated elements that exist simultaneously and persist over time" (Smith & Lewis, 2011: 382). It is common for partners to pursue both firm value creation and joint value creation in coopetition (Fernandez *et al.*, 2014; Gnyawali & Park, 2011; Ritala & Tidström, 2014), but the extent to which these two pursuits might enable or undermine each other has not been systematically addressed.

We contribute to the literature on tension in coopetition (Bengtsson & Kock, 2000; Gnyawali *et al.*, 2016; Tidström *et al.*, 2018) by illuminating the concept of value creation tension. Scholarly research in coopetition often addresses firm value creation and joint value creation in a somewhat independent manner (Gnyawali & Ryan Charleton, 2018; Rai, 2016; Ritala & Hurmelinna-Laukkanen, 2018), yet most coopetition relationships involve simultaneous pursuit of both. Bridging the dialogues on tension in coopetition (Bengtsson *et al.*, 2016; Gnyawali et al, 2016; Le Roy & Fernandez, 2015; Raza-Ullah, 2020) and value creation in coopetition (Gnyawali & Ryan Charleton, 2018; Rai, 2016; Ritala & Hurmelinna-

Laukkanen, 2009;Ritala & Tidström, 2014), we unpack value creation tension and highlight its manifestations through the cognitive, behavioral, and emotional challenges faced by managers. We also draw from the paradox literature (Lewis, 2000; Smith & Lewis, 2011), to explain how attempts to resolve, manage, or manipulate value creation tension may reinforce the positives, leading to virtuous cycles, or negatives, leading to vicious cycles. In so doing, we answer calls to integrate different aspects of coopetition research (Gernsheimer *et al.*, 2021: 130) and offer foundations for further study of a critical but underexplored source of tension in coopetition.

The structure of our paper is as follows. In Section 2, we justify our focus on value creation and lay out key insights regarding firm value creation, which is underpinned by the resource-based view; and joint value creation, which is underpinned by the relational view. In Section 3, we explain value creation tension, highlighting how simultaneous pursuit of both joint value and firm value can undermine partners' efforts, and lead to cognitive, behavioral, and emotional challenges for managers. In Section 4, we explain how attempts to resolve, manage, or manipulate tension may reinforce the positives, leading to virtuous cycles, or negatives, leading to vicious cycles. In Section 5, we articulate the contribution of our essay, highlight limitations, lay out avenues for future research, and discuss implications for other areas of strategic management. Section 6 concludes our essay.

## 2. Value in Coopetition

As the primary motivation for firm participation in coopetition, value creation is a central tenet of scholarly research on coopetition (Czakon *et al.*, 2020; Dagnino, 2009; Ritala & Hurmelinna-Laukkanen, 2018). Value creation in coopetition refers to increasing downstream benefits or decreasing partner costs (Gnyawali & Ryan Charleton, 2018; Rai, 2016). The conceptual roots of value creation in interorganizational relationships originate within cooperative game theory (Brandenburger & Stuart, 1996: 2007; Gans & Ryall, 2017), which exposes the two mechanisms by which value is generated: raising buyers' willingness-to-pay or reducing opportunity costs.

The related concept of value capture (i.e., appropriation of benefits by individual partners) is a key source of competitive risks and challenges (Bouncken *et al.*, 2020; Gnyawali & Park, 2009; Lavie, 2007; Ritala & Hurmelinna-Laukkanen, 2018) and is an important aspect of coopetition (Ritala & Hurmelinna-Laukkanen, 2009; Ritala & Tidström, 2014). Prior studies have juxtaposed value creation with value capture, and exposed challenges and tension between them (Bouncken *et al.*, 2020; Lavie, 2007; Ritala & Hurmelinna-Laukkanen, 2009; Ritala & Tidström, 2014). Undoubtedly, this tension can be significant in coopetition because value creation primarily involves cooperative efforts, whereas value capture involves competitive efforts (Arslan, 2018; Kumar, 2011; Lavie 2007; Ritala & Hurmelinna-Laukkanen, 2009).

Our essay focuses on value creation and sets aside value capture for two reasons. First, while the tension between value creation (generally viewed as cooperative) and value capture (generally viewed as competitive) has received considerable attention, we know much less about opposing elements within value creation, and how these might impact wider coopetition interactions. Research has articulated that cooperation and competition are paradoxical and may generate tension (e.g. Chen, 2008; Gnyawali et al, 2016), but the paradoxical nature of value creation itself is less understood. Second, value creation is the main reason for coopetition participation (Czakon *et al.*, 2020; Gnyawali & Park, 2011; Gnyawali & Ryan-Charleton, 2018) and, throughout the partnership, firms must navigate creating value together (joint value creation) and creating value individually (firm value creation). This presents its own tension and associated challenges, which are poorly understood and which are the focus of this essay.

## 2.1 Value Creation in Coopetition

Two related, but distinct sources of value creation in cooperative relationships involve partners use of cooperative relationships(1) to enhance their own individual resource bases and (2) to combine resources in pursuit of mutual benefit (Das & Teng, 2000b: 37). In the coopetition literature, these value creation sources have become known as firm value creation and joint value creation (Bouncken *et al.*, 2020; Gnyawali & Ryan Charleton, 2018). Key insights regarding firm value creation and joint value creation, as well as the distinction between them, are discussed below and summarized in Table 1.

-------------------------

Insert Table 1 about here

-------------------------

## 2.2 Firm Value Creation

Firm value creation refers to benefit or cost improvements achieved by individual partners as a result of knowledge and resources accessed through coopetition (Gnyawali & Ryan Charleton, 2018). Instead of working together on joint development, firm value creation involves leveraging shared resources for internal use (Gnyawali & Ryan Charleton, 2018) or building on partners' valuable resources for internal use (e.g., Grant & Baden-Fuller, 2004; Hamel, 1991; Inkpen & Tsang, 2007). In both situations, emphasis is on individual firm efforts (such as knowledge recombination and application) to build on what has been developed or acquired through the partnership. Theoretical roots of firm value creation lie primarily in the resource-based view, and the related knowledge-based perspective, which highlight how value creation occurs when resources are productively developed and used (Das & Teng, 2000a; Grant, 1996a: 1996b).

Firm value creation occurs when a partner combines accrued resources from coopetition with its own internal resources (Gnyawali & Ryan Charleton, 2018; Lavie, 2006), or with the resources of a different partner in the alliance portfolio (Gulati, 1999; Wassmer, 2010). Examples include acquisition of new knowledge and skills (Grant & Baden-Fuller, 2004; Kale & Singh, 2007; Schreiner *et al.*, 2009), routines for engaging with other partners (Dyer & Hatch, 2006; Zheng & Yang, 2015; Zollo *et al.*, 2002), or technical expertise (Gnyawali & Park, 2011; Hamel, 1991) as well as increases in reputation and status (Das *et al.*, 1998; Stuart, 2000). In coopetition, firm value creation occurs against a competitive backdrop (e.g., Gnyawali & Park, 2011; Ritala & Hurmelinna-Laukkanen, 2009). The case of TiVo's alliances within the TV ecosystem is an illustration of firm value creation through coopetition relationships, whereby knowledge and resources TiVo obtained from its partners enabled it to create unique value for itself and disrupt the Digital Video Recorder ecosystem (Ansari *et al.*, 2016).

Firm value creation is built on reciprocal exchanges between partners, where each partner helps (or facilitates) the achievement of individual goals by the other. It need not involve coordinated joint actions but, instead, involves solidarity between partners whereby each partner prioritizes the other's best interests, provided that they don't occur at one's own expense (Castañer & Oliveira, 2020; Ring & Van de Ven, 1994). Naturally, one partner's collaboration is contingent on an expectation of reciprocation by the other (Parkhe, 1993; Ritala & Hurmelinna-Laukkanen, 2009). If reciprocated, these efforts can fuel firm value creation potential for both sides, motivating partners "…to find means to obtain the appropriate balance between knowledge sharing and knowledge protection." (Li *et al.*, 2012: 1191).

As it often centers on access to and acquisition of knowledge (e.g., Estrada & Dong, 2020; Park *et al.*, 2014; Ritala & Tidström, 2014), literature on learning races is instructive regarding the rivalrous dynamics and defining features of firm value creation. Learning races (e.g., Hamel, 1991; Khanna *et al.*, 1998) involve partners accessing knowledge from each other, both with the goal of becoming stronger in the same end-markets. In Hamel's (1991) study, for example, a divisional VP explained: "A year and a half into the deal I understood what it was all about... It took me that long to see that [our partner] was preparing a platform to come into all our markets." In learning races, each partner strives to be first to learn from the other, so they can shut down the other's access to knowledge and resources[1]. Knowing this, each firm wishes to avoid being the laggard and strives to outlearn the other. Thus, a learning race unfolds.

As an illustration of an exchange focused on firm value creation, consider Ritala and Tidström's (2014) case study of the Swedish steel company, Steeltra, who pursued coopetition relationships with three other steel industry participants. Steeltra's relationships involved "… buying certain production items… activities related to deliveries, production, and marketing… [and] access to Steeltra's sales network…" (2014: 504). Reciprocal exchange and sharing of resources allowed participants to create firm value via internal efficiencies (e.g., Steeltra and Trafin shared a sales representative in Russia) and competitive positioning (e.g., Santtolo was given access to Steeltra's sales network in Norway and Sweden). However, ultimately, the potentially rivalrous aspect of these relationships led Steeltra to reverse their initial decision to open up its Scandinavian sales network to partners; choosing instead to focus on a more competitive downstream approach and protect their advantage in this area.

### 2.3 Joint Value Creation

Joint value creation, in contrast, involves deep cooperative engagements towards shared goals, leading to benefits that cannot be generated alone (Dyer & Singh, 1998; Gnyawali & Ryan Charleton, 2018). Joint value creation in coopetition refers to benefit or cost improvements as a result of sustained shared contributions to common goals. The theoretical basis for joint value creation lies in the relational view, which emphasizes the resource cospecialization and joint

[1]Once the firm has completed its learning, it has no incentive to incur the costs of remaining in the coopetition relationship or allowing the partner possible access to its own valuable resources (Khanna *et al.*, 1998).

cost minimization rationales for value creation in interorganizational relationships (Dyer & Singh, 1998; Dyer *et al.*, 2018). Sources of joint value creation include relation-specific assets, knowledge-sharing routines, complementary resources, and effective governance (Dyer & Singh, 1998; Dyer *et al.*, 2018). Exemplar cases involving joint value creation include the Renault-Nissan alliance formed in 1999, which centered on partners' joint efforts to build a common platform for electric vehicles (Segrestin, 2005).

A key contributor to joint value creation is deep cooperative engagements among partners, which leads to mutual commitment, specialized investments, and shared implementation of common goals (Castañer & Oliveira, 2020; Dyer & Singh, 1998; Gulati *et al.*, 2012;). Creating joint value from combined, relation-specific assets requires trust and shared faith between partners to ensure that they remain committed to each other until nonrecoverable investments are realized (Khanna, 1998; Segrestin, 2005). Similarly, effective governance can create value over time by lowering the coopetition partners' costs, but only when trust, shared norms, and social relations are developed among partners (Cao & Lumineau, 2015; Carson *et al.*, 2006).

For these reasons, it is important for joint value creation that partners refrain from, or limit, individualistic behaviors (Arslan, 2018; Khanna *et al.*, 1998; Kumar, 2010). Individualistic behaviors may lead partners to take actions which jeopardize joint value creation, such as overprotecting or overmonitoring their resources (Arslan, 2018), limiting the scope of joint activities (Oxley & Sampson, 2004), or constraining resource exchange (Lavie, 2006). For example, when partners in the Alphabus joint venture, TAS and Astrium, prioritized firm value creation by leveraging their individual satellites (despite stated commitments to joint value creation), this reduced potential joint value creation from the shared project (Fernandez *et al.*, 2014).

## 3. Value Creation Tension in Coopetition

As noted, the focus on juxtaposing value creation and value capture in prior coopetition literature has left somewhat of a vacuum regarding tension within value creation. Tension refers to strain experienced by partners in coopetition (Das & Teng, 2000a; Gnyawali *et al.*, 2016) and value creation tension refers to strain stemming from efforts to pursue both firm value creation and joint value creation. The tension manifests through contradictions between the two different orientations: efforts to pursue joint value creation undermine efforts to pursue firm value creation and vice versa. The finite nature of resources means that, past a certain point, efforts to push joint value creation will occur at the expense of firm value creation, and vice versa. This is observable through four contradictions between the theoretical foundations of the two different orientations: the resource-based view (firm value creation) and the relational view (joint value creation).

First, tension occurs because firm value creation and joint value creation pull resources in opposing directions in efforts to generate value. Pursuit of firm value creation increases the risks associated with investing in cospecialized assets, which is a key determinant of joint value creation (Dyer & Singh, 1998; Dyer *et al.*, 2018). Firm value creation involves maximizing one's own internal resources (Hamel, 1991; Kale & Singh, 2007), which is at odds with the open and sharing approach necessary for cospecialized investments which would yield complementarities between partners' resource sets (Dyer & Singh, 1998). In order for resources to be combined in the complementary manner necessary for joint value creation, factors contributing to firm value creation, such as knowledge tacitness and complexity (Dierickx & Cool, 1989; Lippman & Rumelt, 1982), would have to be relaxed.

Second, as evidenced by insights from the literature on learning races (Khanna *et al*., 1998; Khanna, 1998; Hamel, 1991), firm value creation often involves a rivalrous undercurrent (e.g., Bouncken *et al.*, 2020; Ritala & Hurmelinna-Laukkanen, 2009; Ritala & Tidström, 2014) which could undermine joint value creation (Arslan, 2018). From a joint value creation perspective, "…an effective strategy… may be for firms to systematically share valuable know-how with alliance partners (and willingly accept some spillover to competitors)…" (Dyer & Singh, 1998: 675). Yet this depends on a mutual commitment to joint value creation, which would be undermined if one partner emphasizes protectiveness, or attempts to pursue a narrow definition of firm value creation (such as maximizing inflows and while minimizing outflows).

Third, and relatedly, joint knowledge sharing routines (a key determinant of joint value creation) are also undermined by firm value creation because a focus on private learning (e.g., Inkpen, 2000; Grant & Baden-Fuller, 2004) inhibits development and use of such routines. Knowledge sharing routines are built when partners "…get to know each other well…" and accumulate partner-specific absorptive capacity (Dyer & Singh, 1998: 665). However, a focus on firm value creation outcomes, such as acquiring knowledge and winning the learning race, means that partners are likely to regard each other with suspicion and distrust. Because firm value creation occurs in a competitive context within coopetition, this suspicion and distrust could be stronger in coopetition than non-coopetition relationships (Gnyawali & Ryan Charleton, 2018) and may prevent joint knowledge sharing routines from developing.

Fourth, when partners pursue both firm value creation and joint value creation, efficiencies due to scale and scope are less likely to occur. The split of efforts and attention between joint and private learning, and between combining and protecting resources, limit partners' reaping of the benefits of doing either efficiently. Indeed, isolating mechanisms such as causal ambiguity and asset interconnectedness (Barney, 1991; Dierickx & Cool, 1989), that are necessary to sustain joint value creation (Dyer & Singh, 1998) are not the same as—and often at odds with—those sustaining firm value creation. For example, resource indivisibility is important for joint value creation (Dyer & Singh, 1998) but, for firm value creation, it is necessary that one partner’s resources are easily separated, thus enabling them to be transferred across firm boundaries and repurposed for private uses (e.g., Lavie, 2006).

As a result of value creation tension at the partnering firm level, individual managers also face cognitive, emotional, and behavioral challenges as they grapple with the contradictory demands of firm value creation and joint value creation. The tension between joint value creation and firm value creation is paradoxical in nature because firm value creation and joint value creation are “…contradictory yet interrelated elements that exist simultaneously and persist over time” (Smith & Lewis, 2011: 382). Tension in coopetition becomes salient through managerial experiences (Gnyawali *et al.*, 2016; Lundgren-Henriksson & Kock, 2016; Raza-Ullah, 2020) and scholars have emphasized cognitive and behavioral (Gnyawali *et al.*, 2016) as well as emotional (Raza-Ullah, 2020) challenges for managers due to tension in coopetition.

From a cognitive perspective, the concurrent pursuit of firm value creation and joint value creation manifests through ‘role conflicts’ faced by managers. Role conflicts involve “people having different opinions about how tasks should be carried out” (Tidström, 2014: 262). Role conflicts emerge from value creation tension because managers would be expected to pursue shared goals and cooperate deeply with their counterparts and, at the same time, extract resources and knowledge to pursue individual goals. This results in “…cognitive difficulty [for managers]… when they pursue multiple and simultaneous contradictory demands …” (Raza-Ullah, 2020: 14). Le Roy and Fernandez (2015: 14) note that managing paradoxical tension “…requires high cognitive capabilities that are difficult to acquire and develop…” and Smith and Tushman (2005: 523) argue that processing such tension would require “managerial frames and processes that recognize and embrace contradiction.”

Value creation tension also creates managerial challenges due to the two different behavioral approaches required: reciprocity to facilitate individual goals versus deep cooperation towards shared goals. The former refers to helping each other achieve some individual aims (Castañer & Oliveira, 2020) with limited or no coordinated joint actions between partners. It involves solidarity, whereby each partner prioritizes the other's best interests, provided they don't occur at one's own expense (Castañer & Oliveira, 2020; Ring & Van de Ven, 1994). In contrast, deep engagements towards shared goals refers to a united approach based on mutuality and involving the shared development and implementation of common objectives (Dyer & Singh, 1998). When pursuing joint value creation, individualistic behaviors could jeopardize partners' unity and undermine shared development efforts (Arslan, 2018; Khanna *et al.*, 1998; Kumar, 2010). Given the focus on their own firm value creation efforts, a managing director interviewed by Tidström (2014: 266) noted "…it was hard to convince the employees of the benefits of sharing drawing with other companies." This reinforces Le Roy and Fernandez's concerns that, absent high cognitive capabilities, managers faced with tension in coopetition "…can behave either too competitively or too cooperatively." (2015: 14)

The concurrent pursuit of firm value creation and joint value creation also leads to the amalgamation of intense positive and negative emotions, which exacerbates the emotionally charged and challenging nature of coopetition (Raza-Ullah *et al.*, 2020). Positive emotions might include a sense of social belonging while nurturing deep engagements and joint value creation (e.g., Lundgren-Henriksson & Kock, 2016); whereas negative emotions of suspicion and distrust may arise from concurrently pursuing firm value creation. Specific ways that emotional challenges could manifest through the amalgamation of such emotions include "…anxious feelings, nervousness, and frustration", and "…guilt, stress, skepticism, confusion, and fear…" experienced by managers (Lundgren-Henriksson & Kock, 2016: 25-27). The combination of intense emotions at different extremes may impede sensemaking (Maitlis & Sonenshein, 2010) and hinder constructive efforts in coopetition (Lundgren-Henriksson & Kock, 2016; Raza-Ullah *et al.*, 2020).

## 4. Virtuous and Vicious Cycles

After becoming aware of the manifestations of value creation tension, managers may make attempts to resolve, manage, or manipulate the tension (Das & Teng, 2000a; Gnyawali *et al.*, 2016). Indeed, two firms with the same starting point may go through different paths depending on how they attempt to handle value creation tension. Management of tension can trigger positive or negative outcomes for coopetition partners (Gnyawali *et al.*, 2016), and subsequent behaviors can fuel reinforcing cycles of positives or negatives (e.g., Lewis, 2000). A reinforcing cycle of positives spurs a virtuous cycle of value creation while a reinforcing cycle of negatives spurs a vicious cycle. The latter would jeopardize value creation and could even lead to value destruction depending on the extent of tension and how it is handled. In Figure 1, we lay out these two extremes, drawing on Smith and Lewis' conceptualization of virtuous and vicious cycles (2011: 391). In Table 2, we articulate relevant mechanisms, managerial manifestations, and consequences for partnering firms of virtuous and vicious cycles in coopetition. Below, we elaborate on these situations and provide practical illustrations.

------------------------

Insert Figure 1 and Table 2 about here

------------------------

### 4.1 Virtuous Cycle

A virtuous cycle refers to a reinforcing upward trajectory through positive synergies among mutually supporting elements (Smith & Lewis, 2011). A positive synergy is akin to the notion of complementarity, whereby one element raises the value of another element, resulting in a situation where the combination is worth more than the sum of the parts. Virtuous cycles are perpetuated as positive synergies get reinforced over time (Lewis, 2000). As noted in Table 2, virtuous cycles may develop when managers are capable of achieving paradoxical cognition (Smith & Lewis, 2011;Smith & Tushman, 2005), which can be harnessed to derive benefits from tensions in coopetition (Bengtsson *et al.*, 2020). Paradoxical cognition refers to a mental representation that recognizes and sees the merit in the pursuit of contradictory opposites (Smith & Lewis, 2011), such as firm value creation and joint value creation. In turn, paradoxical cognition sets the stage for constructive emotions and behaviors, such as emotional calmness and equanimity, which are critical in order to deal with the opposites (Raza-Ullah, 2020).

Returning to the two paths for creating value (Bowman & Ambrosini, 2000; Brandenburger & Stuart, 1996), there are two possible triggers for a virtuous cycle of value creation. These involve partnering firms organizing their response to tension so that (1) an element of joint (firm) value creation increases the benefits available from a different element of firm (joint) value creation; or so that (2) an element of joint (firm) value creation decreases the costs of a different element of firm (joint) value creation.

Consider the example of the S-LCD joint venture (JV) that Sony and Samsung created in 2004 to develop 7$^{th}$ generation LCD-TV panel technology (Gnyawali & Park, 2011). Samsung and Sony were "fierce industry rivals with killer instincts to succeed—often at each other's expense. Still, they have pulled off one of the most interesting and fruitful collaborations in global high-tech…an alliance that is reshaping the industry" (Bloomberg, 2006). When the JV was announced, both firms faced considerable tension. The joint efforts to create the LCD-panel technology were threatened by each firm's intra-alliance efforts to create firm value, as Samsung sought to glean Sony's expertise about engineering televisions, while Sony pursued Samsung's knowledge regarding LCD electronics (Gnyawali & Park, 2011). Sony was labeled as a "traitor" by Japanese media, which led to emotional strain. Further adding to the strain was the fact that managers of both firms were required to work collaboratively with a fierce rival to create joint value, while experiencing cognitive strain due to fear of losing secrets to each other (Dvorak & Ramstad, 2006). Behavioral challenges arose when each company tried to strategize and outcompete each other through unilateral actions aimed at the same downstream markets.

Nonetheless, while Samsung and Sony faced tension which manifested through cognitive, emotional, and behavioral strain, they were able to see the merit of working together so that each might generate joint value and firm value from the endeavors. Both firms' individual LCD-TV ranges relied on the jointly developed LCD panel technology, while the firms' individual usage of the LCD technology and learning opportunities helped to accelerate their joint efforts. Alongside their pursuit of joint value, each firm utilized the relationship to expand their individual technological competence, fueling firm value creation through the development of their own LCD-TV ranges. Chang (2008: 8) argues that "Samsung's leading LCD technology and Sony's expertise in product development helped both companies gain competitive advantage against their rivals." The joint value achieved through development of LCD technology panels and establishing LCD as the technological standard for flat-screen TV led the partners make additional commitments for the 8$^{th}$ generation technology (Gnyawali & Park, 2011). Over time, these joint investments enabled both firms to acquire knowledge and create further firm value from the relationship, reinforcing the positives of the relationship.

**4.2 Vicious Cycle**

A vicious cycle refers to a reinforcing downward trajectory for overall value creation through negative synergies among mutually opposing elements (Smith & Lewis, 2011). The paradox literature suggests that a vicious cycle stems from "cognitive and behavioral forces for consistency, emotional anxiety and defensiveness, and organizational forces for inertia" (Smith & Lewis, 2011: 391). As noted in Table 2, roots of a vicious cycle in coopetition exist in the mental representation that views a competitor-partner as a serious problem to avoid; high emotional anxiety of managers as they work with competitor-partner; and behaviors that are defensive and emphasize self-interest. Once a vicious cycle begins, the perpetuation of such behaviors can reinforce a downward spiral.

The two paths to a vicious cycle are the antithesis of those outlined in relation to a virtuous cycle. They involve partnering firms organizing their response to tension so that (1) one element of joint (firm) value creation decreases the benefits available from a different element of firm (joint) value creation; or (2) one element of joint (firm) value creation increases the costs of a different element of firm (joint) value creation.

In the2009 partnership between Volkswagen and Suzuki, for example, joint value creation efforts centered around the development and sale of small diesel cars for India (WSJ, 2009). At the same time, both firms recognized firm value creation opportunities: "..Suzuki would gain access to next generation, fuel-efficient powertrain technologies and advanced markets while VW would get help tapping India and learn low-cost manufacturing." (Automotive News, 2015). Pursuing both joint value creation and firm value creation led to tension, manifesting through managers' cognition, behavior, and emotion. According to a Suzuki spokesman, Volkswagen reneged on an initial commitment to share proprietary technology and data; while Volkswagen expressed discontent that Suzuki was not committing necessary manpower to joint efforts (Automotive News, 2015). In the face of tension, rather than accept and learn to live with the challenges, both firms sought 'yes or no' commitments, without recognizing the merit of holding both cognitive perspectives simultaneously. Behaviors undertaken by both firms exacerbated the tensions. In early 2011, Suzuki presented Volkswagen with a list of complaints regarding the alliance, to which Volkswagen CEO, Martin Winterkorn, reacted angrily by "pounding the table" (Automotive News, 2015). The possibility for deep engagements were further undermined by individualistic firm moves – Suzuki purchased engines from Fiat (a major Volkswagen rival) (FirstPost, 2011), while Volkswagen snubbed a deal to bring Suzuki's A-Star model to Europe, even though Suzuki had invested considerable time in the project. Anger, mutual distrust, and suspicion were allowed to foster, leading a Suzuki executive to tell his Volkswagen counterpart that "…the alliance is meaningless… Our engineers have lost the desire to cooperate with VW... We understand it is impossible to work with top management to resolve the front-line problems" (Automotive News, 2015). The partnership was finally dissolved in 2016, following four years of costly arbitration (WSJ, 2016).

Importantly, even virtuous cycles can turn into vicious cycles unless continuous efforts are made to respond to tension by embracing the opposites, as outlined in Table 2 (Smith & Lewis, 2011). Embracing the tension, and retaining an integrative mindset, are important for sustaining a virtuous cycle (Smith & Lewis, 2011). As the S-LCD venture progressed, for example, and in contrast to their initial efforts to manage the tension constructively, both Sony and Samsung took actions which exacerbated these tensions. While the S-LCD JV was thriving, these actions included Samsung privately establishing its own plant for developing 7$^{th}$ generation LCD-TV panels (a firm value creation move which exaggerated tension with Sony). Sony was ahead of Samsung in TV market share in early 2006, but Samsung then "surged past Sony in overall sales of TVs…" (WSJ, 2011). Two years later, Sony teamed up with Sharp for a 10$^{th}$ generation LCD plant and, soon after, Sony partnered with other Japanese firms for OLED technology (these firm value creation efforts also exaggerated tension with Samsung). Samsung's establishment of a wholly-owned rival LCD plant and Sony's partnering with Sharp led to mutual discontent with each other's attitudes and behaviors, likely increased the cost of knowledge protection and monitoring, and gave rise to on-going suspicion of each other. These unilateral actions took little notice of the interdependence between firm and joint value creation, and possibly planted the seed for the start of a vicious cycle that led to the partnership's eventual demise (Sony sold its stake in S-LCD to Samsung at the end of 2011; WSJ, 2011)

## 5. Contribution, Limitations and A Research Agenda

While value creation is essential to achieve and maintain competitive advantage, and coopetition offers a unique way to create value via interorganizational relationships, the paradoxical nature of coopetition leads to tension which makes value creation challenging and intriguing.  Much of the current literature has examined tension arising from the simultaneity of competition and cooperation, but we know little about tension arising from the simultaneous pursuit of firm value creation and joint value creation. This gap is important because, even though tension between value creation and value capture has received attention, less is known about the opposing elements within value creation, and how they might impact wider coopetition outcomes.

During a coopetition partnership, firms navigate creating value together (joint value creation) and creating value individually (firm value creation) (Czakon *et al.*, 2020; Gnyawali & Park, 2011; Gnyawali & Ryan-Charleton, 2018). This presents its own challenges and results in tension, which is poorly understood and has been the focus of this essay. We have taken preliminary steps to unpack value creation tension, which occurs due to simultaneous efforts to pursue firm value creation and joint value creation in coopetition; and results in cognitive, behavioral, and emotional challenges for managers. Attempts to manage the tensioncan trigger positive outcomes or negative outcomes, and we have also suggested that subsequent behaviors can reinforce the positives (leading to virtuous cycles) or negatives (leading to vicious cycles).

Our primary contribution is to the literature on tension in coopetition (Bengtsson & Kock, 2000; Gnyawali *et al.*, 2016; Tidström *et al.*, 2018). The coopetition literature often addresses firm value creation and joint value creation in an independent way (Gnyawali & Ryan Charleton, 2018; Rai, 2016; Ritala & Hurmelinna-Laukkanen, 2018), yet most coopetition relationships involve simultaneous pursuit of both. Building on and integrating the existing literature on tension in coopetition with literature on value creation, we isolate and unpack the concept of value creation tension, and explore its consequences at the level of the partnering firm and individual manager. Drawing on the paradox literature (Lewis, 2000; Smith & Lewis, 2011), we also discuss how attempts to resolve, manage, or manipulate tension may leading to virtuous and vicious cycles. This establishes a theoretical basis for deepening our understanding of an important and underexplored tension in coopetition.

There are several limitations to our approach which also provide opportunities for further research. We have written this essay to spark a conversation regarding the complexities of value creation tension and, therefore, our essay might raise more questions than it answers. There are many promising opportunities to advance our understanding of value creation tension and its implications. For instance, it is beyond the scope of one essay to comprehensively connect firm tension to manager tension in coopetition. In addition, because we have focused on just one aspect of generating positive results from coopetition, there is work required to integrate the concepts highlighted here with other areas in the coopetition literature which are more developed. In the following section, we suggest five promising avenues for further research.

**5.1 Future Research Agenda**

First, although we have drawn insights from the resource-based view (Barney, 1991; Lavie, 2006) and the relational view (Dyer & Singh, 1998), and taken preliminary steps to integrate them with the paradox perspective (Lewis, 2000; Smith & Lewis, 2011), further analysis is needed to reconcile these theoretical explanations, leading to a cohesive view of value creation tension. In combination, the resource-based view and the relational view offer quite concrete arguments about tension between firm value creation and joint value creation due to differences in how resources are organized, resource advantages due to scale and scope, and isolating mechanisms, among other factors (Dyer & Singh, 1998; Lavie, 2006). However, the paradox literature offers insights at a more abstract level regarding paradoxical cognition (Smith

&Tushman, 2005) and associated benefits of emotional calmness (Raza-Ullah, 2020), equanimity, and synergistic integration of opposites (Chen, 2008; Gnyawali *et al.*, 2016).Because the resource-based view and the relational view are most commonly applied at the firm level, whereas paradox emphasizes the cognition, behavior and emotion of individual managers, there are promising opportunities to interweave these perspectives and expose a more comprehensive view. In what ways can the paradoxical cognition of managers outweigh the firm tradeoffs suggested by resource-based theory and the relational view? Under what conditions, will managers' cognitive, emotional and behavioral responses outweigh firm tradeoffs? How might paradoxical cognition be leveraged by individual managers to manage value creation tension associated with knowledge-based resources? Outside of knowledge-based resources, what other contingencies would moderate the impact of paradoxical cognition on value creation? Addressing these and related questions may provide a more nuanced view of value creation tension in coopetition and contribute to the broader interorganizational relationships literature, where variants of these issues also exist.

Second, in Table 2, we draw from the paradox literature to articulate manifestations, mechanisms and consequences of virtuous and vicious cycles. Our insights have laid some groundwork but require further development, so we encourage researchers to expand, refine, and empirically test these ideas. Examination of factors that facilitate or obstruct the realization of particular value creation outcomes will be useful, given the absence of theoretical reconciliation (as noted above) between the resource-based and relational views, on one hand, and the paradox literature, on the other. To advance this line of inquiry, we lay out a few key questions that deserve further inquiry. Can value creation pursuits be separated in the same fashion as firms separate competition and cooperation (e.g., Bengtsson & Kock, 2000: 2014)? We suspect not, given that some aspects of firm value creation and joint value creation are mutually reinforcing (Gnyawali & Ryan Charleton, 2018), but this requires further theorizing and investigation. Which aspects of value creation exhibit positive and negative synergies? To what extent do contextual contingencies alter the tension among different value creation pursuits? Which capabilities can help to mitigate value tension? How can partnering firms maintain virtuous cycles and break vicious cycles? More broadly, a systematic examination of factors that can trigger a new cycle, or neutralize an existing cycle, will add to our understanding of value creation in coopetition.

Third, building on these ideas, researchers could also delve into root causes of virtuous and vicious cycles and identify ways of encouraging or attenuating these causes. For instance, the coopetition literature has emphasized the development of unique capabilities in order to manage paradoxical tension (Gnyawali et al, 2016; Raza-Ullah, 2020). Such capabilities could help create and maintain a virtuous cycle, or detect and fix signs of a vicious cycle (Smith & Lewis, 2011). Costs of a vicious cycle are high, potentially extending to value destruction (Gnyawali & Ryan Charleton, 2018), underscoring the need to address and correct negative manifestations of cognitive, emotional, and behavioral factors (Table 2) as they appear. In some situations, partners may screen the relationship, identify destructive behaviors and intents, and take steps to break a cycle (Smith & Lewis, 2011). However, in other situations, it may be more efficient to dissolve the relationship, particularly if engrained behaviors prove difficult to unravel. It might also be that partners have rather different interpretations of the situation. (For instance, towards the end of the Suzuki-Volkswagen partnership, Suzuki wanted to withdraw but Volkswagen wanted to persist (Automotive News, 2015).) To the extent that further research can distinguish between situations worth persisting with versus those requiring dissolution, there are opportunities to enlighten both scholarly understanding and managerial decision-making.

Fourth, because value destruction is never far away in coopetition (Gnyawali & Ryan Charleton, 2018; Park & Russo, 1996; Raza-Ullah, 2018), and given the earlier discussion concerning vicious cycles, exploring value destruction more deeply can yield insights about negative outcomes from coopetition (e.g., Park & Ungson, 2001) and how they can be avoided. It appears that there are three ways in which value destruction might occur due to a vicious cycle. One, value destruction might occur in a literal sense, in that pre-existing value may be destructed. For example, a partner might enter a coopetition relationship with some rare and valuable knowledge which is jeopardized due to value creation tension, undermining its value or rarity. Two, value destruction might occur when an alliance fails to reach its potential (Agarwal *et al.*, 2010) or falls behind competing alliances due to suboptimal achievements. In this situation, even despite a net positive effect, potential gains may not be fully realized (Fernandez *et al.*, 2014) and partners' overall competitive standing may be weakened (Gnyawali & Ryan Charleton, 2018; Hamel, 1991). Three, value destruction may occur due to opportunity costs (Greve *et al.*, 2013), where a partner misses out on a superior alternative option, even if a coopetition relationship itself leads to value creation. Value destruction is somewhat of an umbrella term (Gnyawali & Ryan Charleton, 2018), so it will be helpful to precisely distinguish each of these possibilities and articulate linkages with value creation tension and vicious cycles. To support these efforts, it will also be beneficial to find new measures (or adapt existing measures) of value destruction. Event studies have been a popular approach for measuring partnership outcomes, but because they capture expected value creation instead of actual value creation, and because expected value creation might be subject to an optimism bias, this approach has limitations for measuring value destruction. Survey-based measures (Bouncken *et al.*, 2019; Ritala, 2012) to assess the extent of value creation or destruction might be quite helpful. Further, in-depth case studies of coopetition relationships, whether through observations and manager interviews, or through archival historical data, can help develop a deeper understanding of value destruction.

Fifth, while our essay concentrates on coopetition relationships, we suggest that value creation tension has implications across a spectrum of interorganizational relationships. The competitive context underpinning coopetition makes value tension quite complex and intense, but value creation tension is not limited to coopetition. Costs and challenges of pursuing firm value creation and joint value creation simultaneously are likely to manifest in most forms of interorganizational relationships. Moreover, because cognitive, behavioral and emotional forces of value creation tension in coopetition are likely impacted by the subsequent downstream competition for value capture, studying the impact of value tension in non-coopetition relationships (i.e., relaxing the level of competition associated with value capture) might provide cleaner insights about value creation tension with less confounding influences. We encourage scholars studying other forms of interorganizational relationships, such as strategic alliances, joint ventures, buyer–supplier agreements, and cross-sector partnerships, to build on the conceptual points we have articulated and to examine how value creation tension might occur and manifest in interorganizational relationships other than coopetition.

## 6. Conclusion

The coopetition literature has thus far emphasized tension due to the existence of simultaneous competition and cooperation. We identify and unpack a distinct and important tension—value creation tension—that arises due to firm value creation and joint value creation in coopetition. By exposing the opposing elements and managerial challenges associated with simultaneously pursuing firm value creation and joint value creation, we bridge the conversations on tension and value creation in coopetition. We also explain how attempts to resolve, manage, or manipulate value creation tension may reinforce the positive outcomes, leading to virtuous cycles, or negative outcomes, leading to vicious cycles. Overall, by developing and unpacking value creation tension, we offer foundations for addressing an important tension in coopetition, which has received scant scholarly attention to date.

## FIGURES AND TABLES

**Figure 1: Value Creation Tension, Virtuous Cycles, and Vicious Cycles in Coopetition**

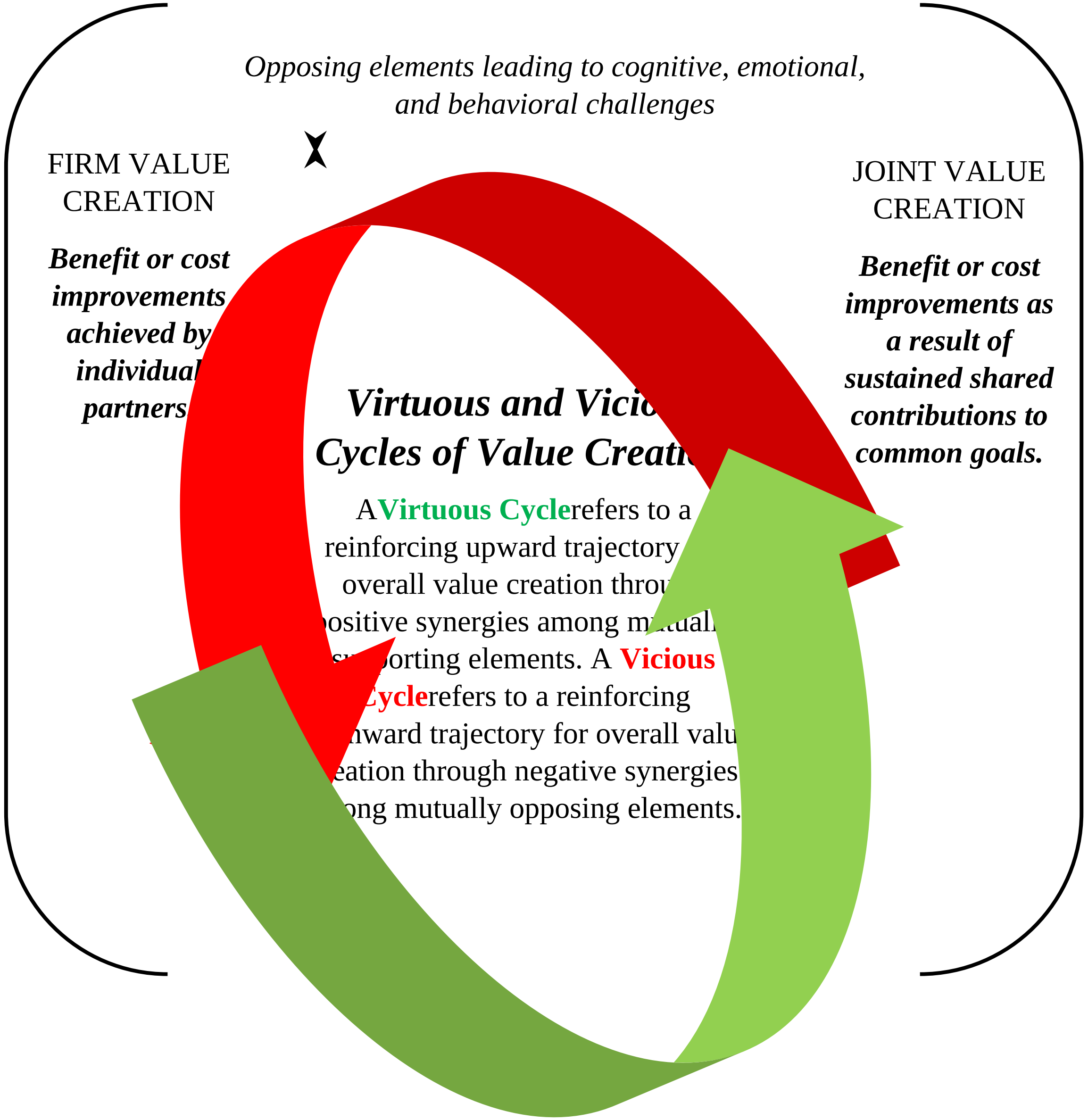

**Table 1: Distinguishing Firm Value Creation and Joint Value Creation**

| | Firm Value Creation | Joint Value Creation |
|---|---|---|
| **Definition** | Benefit or cost improvements achieved by individual partners as a result of knowledge and resources accessed through coopetition. | Benefit or cost improvements as a result of sustained shared contributions to common goals. |
| **Primary Theoretical Basis** | Resource-based view | Relational view |
| **Key Sources of Value** | Build on the firm's portion of appropriated joint value and combine acquired resources with own internal resources, or those of a different partner in the alliance portfolio. | Relation-specific assets, knowledge-sharing routines, complementary resources, and effective governance. |
| **Nature of Engagement** | Partners voluntarily help each other achieve individual aims through reciprocal exchanges. Solidarity between partners facilitates each partner prioritizing the other's best interests, provided it does not occur at one's own expense. | Partners work together closely to jointly implement common goals. Joint value is maximized through deep cooperation which enables trust and shared faith between partners. |
| **Illustrative Exemplar** | TiVo's relationships within the TV ecosystem, which helped them to access knowledge and resources necessary for their individual goals. | Renault-Nissan partnership to build a common platform for electric vehicles. |

**Table 2: Virtuous and Vicious Cycles of Value Creation in Coopetition**

| | **Virtuous Cycle** | **Vicious Cycle** |
|---|---|---|
| **Definition** | A reinforcing upward trajectory for overall value creation through positive synergies among mutually supporting elements. | A reinforcing downward trajectory for overall value creation through negative synergies among mutually opposing elements |
| **Mechanisms** | ● Paradoxical cognition. Recognition and acceptance of tension inherent in the opposites: joint and firm value creation.<br>● Fostering of mutuality between partners.<br>● Integration of differences and opposites to develop creative solutions. | ● Avoidance of, or rejection of, tension.<br>● Separation of firm and joint value creation, or failure to see them as interdependent.<br>● Viewing opposites as inherently irreconcilable. |
| **Managerial Manifestations** | ● **Cognitive:** Mental representation that recognizes and embraces the merit of opposites. Thriving in paradox.<br>● **Emotional:** Calmness, evenness, equanimity. Holding and managing opposing emotions.<br>● **Behavioral:** Acceptance of and engagement with behavioral complexity. | ● **Cognitive:** Mental representation viewing opposites as problematic, to be avoided. Consistency seeking. Denial of alternative views.<br>● **Emotional:** Emotional anxiety, unable to hold opposite emotions. Emotional defensiveness.<br>● **Behavioral:** Opposite avoidance, defensiveness, inaction, single choice. |
| **Consequences for Partnering Firms** | ● Motivation to tackle complex, ambitious firm and joint value creation projects.<br>● Judicious sharing of knowledge and expertise.<br>● Complementary cycle between firm benefits and joint benefits. | ● Avoidance of major or risky value creation undertakings.<br>● Resource commitment constraints.<br>● Value destruction (individually and/or collectively). |

## References


Agarwal, R., Croson, R., & Mahoney, J. T. 2010. The role of incentives and communication in strategic alliances: An experimental investigation. *Strategic Management Journal*, 31: 413-437.

Ansari, S., Garud, R., & Kumaraswamy, A. 2016. The disruptor's dilemma: TiVo and the US television ecosystem. *Strategic Management Journal*, 37, 1829-1853.

Arslan, B. 2018. The interplay of competitive and cooperative behavior and differential benefits in alliances. *Strategic Management Journal*, 39: 3222–3246.

Automotive New, 2015. How the VW-Suzuki alliance went wrong. Aug 3. Retrieved March 2021: https://www.autonews.com/article/20150803/OEM/308039944/how-the-vw-suzuki-alliance-went-wrong.

Barney, J. 1991. Firm resources and sustained competitive advantage. *Journal of Management*, 17: 99-120.

Bengtsson, M., & Kock, S. 2000. "Coopetition" in business networks — to cooperate and compete simultaneously. *Industrial Marketing Management*,29: 411–426.

Bengtsson, M., & Kock, S. 2014. Coopetition—Quo vadis? Past accomplishments and future challenges. *Industrial Marketing Management*, 43: 180-188.

Bengtsson, M., Raza-Ullah, T., & Srivastava, M. K. 2020. Looking different vs thinking differently: Impact of TMT diversity on coopetition capability. *Long Range Planning*, 53.

Bengtsson, M., Raza-Ullah, T., & Vanyushyn, V. 2016. The coopetition paradox and tension: The moderating role of coopetition capability. *Industrial Marketing Management*, 53, 19-30.

Bloomberg, 2006. Samsung and Sony's Win-Win LCD Venture. November 28. Retrieved September 2020: https://www.bloomberg.com/news/articles/2006-11-28/samsung-and-sonys-win-win-lcd-venturebusinessweek-business-news-stock-market-and-financial-advice.

Bouncken, R. B., Fredrich, V., & Kraus, S. 2020. Configurations of firm-level value capture in coopetition. *Long Range Planning*, 53.

Bouncken, R. B., Fredrich, V., Kraus, S., & Ritala, P. 2019. Innovation alliances: Balancing value creation dynamics, competitive intensity and market overlap. *Journal of Business Research*. 112: 240-247.

Bouncken, R. B., Fredrich, V., Ritala, P., & Kraus, S. 2018a. Coopetition in new product development alliances: advantages and tensions for incremental and radical innovation. *British Journal of Management*, 29: 391-410.

Bouncken, R. B., Laudien, S. M., Fredrich, V., & Görmar, L. 2018b. Coopetition in coworking-spaces: value creation and appropriation tensions in an entrepreneurial space. *Review of Managerial Science*, 12: 385-410.

Bowman, C., & Ambrosini, V. 2000. Value creation versus value capture: Towards a coherent definition of value in strategy. *British Journal of Management*, 11: 1–15.

Brandenburger, A., & Stuart, H. 2007. Biform games. *Management Science*, 53: 537-549.

Brandenburger, A.M., & Stuart, H.W. 1996. Value-based business strategy. *Journal of Economics & Management Strategy*, 5: 5–24.

Cao, Z., & Lumineau, F. 2015. Revisiting the interplay between contractual and relational governance: A qualitative and meta-analytic investigation. *Journal of Operations Management*, 33: 15-42.

Carson, S. J., Madhok, A., & Wu, T. 2006. Uncertainty, opportunism, and governance: The effects of volatility and ambiguity on formal and relational contracting. *Academy of Management Journal*, 49: 1058-1077.

Castañer, X., & Oliveira, N. (2020). Collaboration, Coordination, and Cooperation Among Organizations: Establishing the Distinctive Meanings of These Terms Through a Systematic Literature Review. *Journal of Management*, 46: 965-1001.

Chang, S. J. 2008. Sony VS. Samsung: The inside story of the electronic giants' battle for global supremacy. Wiley & Sons.

Chen, M. J. 2008. Reconceptualizing the competition—cooperation relationship: A transparadox perspective. *Journal of Management Inquiry*, 17: 288-304.

Czakon, W., Srivastava, M. K., Le Roy, F., & Gnyawali, D. 2020. Coopetition strategies: Critical issues and research directions. *Long Range Planning*, 53.

Dagnino, G. B. 2009. Coopetition strategy: A new kind of interfirm dynamics for value creation. In GB Dagnino, E Rocco (Eds) *Coopetition Strategy: Theory, Experiments and Cases*. London: Routledge: 25–43.

Das, S., Sen, P. K., & Sengupta, S. 1998. Impact of strategic alliances on firm valuation. *Academy of Management Journal*, 41: 27-41.

Das, T. K., & Teng, B. S. 2000a. Instabilities of strategic alliances: An internal tensions perspective. *Organization Science*, 11: 77-101.

Das, T. K., & Teng, B. S. 2000b. A resource-based theory of strategic alliances. *Journal of Management*, 26: 31-61.

Dierickx, I., & Cool, K. 1989. Asset stock accumulation and sustainability of competitive advantage. *Management Science*, 35: 1504-1511.

Dvorak, P., & Ramstad, E. (2006, January 3). TV marriage: Behind Sony-Samsung Rivalry, An Unlikely Alliance Develops Electronics Giants Join Forces On Flat-Panel Technology; Move Prompts Complaints. Wall Street Journal, Page A1.

Dyer, J. H., & Hatch, N. W. 2006. Relation-specific capabilities and barriers to knowledge transfers: Creating advantage through network relationships. *Strategic Management Journal*, 27: 701–719.

Dyer, J. H., Singh, H., & Hesterly, W. S. 2018. The relational view revisited: A dynamic perspective on value creation and value capture. *Strategic Management Journal*, 39: 3140–3162.

Dyer, J.H., & Singh, H. 1998. The relational view: Cooperative strategy and sources of interorganizational competitive advantage. *Academy of Management Review*, 23: 660–679.

Estrada, I., & Dong, J. Q. 2020. Learning from experience? Technological investments and the impact of coopetition experience on firm profitability. *Long Range Planning*, 53: In press.

Fernandez, A.S., Le Roy, F., & Gnyawali, D. R. 2014. Sources and management of tension in co-opetition case evidence from telecommunications satellites manufacturing in Europe. *Industrial Marketing Management*,43: 222–235.

FirstPost, 2011. VW-Suzuki divorce: Logic of beauty-and-brains didn't work. September 13. Retrieved March 2021: https://www.firstpost.com/world/vw-suzuki-divorce-logic-of-beauty-and-brains-didnt-work-82556.html.

Gans, J., & Ryall, M.D. 2017. Value capture theory: A strategic management review. *Strategic Management Journal*, 38: 17–41.

Gernsheimer, O., Kanbach, D. K., & Gast, J. 2021. Coopetition research-A systematic literature review on recent accomplishments and trajectories. *Industrial Marketing Management*, 96: 113-134.

Gnyawali, D. R., & Park, B. J. 2011. Co-opetition between giants: Collaboration with competitors for technological innovation. *Research Policy*, 40: 650–663.

Gnyawali, D. R., & Ryan Charleton, T. 2018. Nuances in the interplay of competition and cooperation: Towards a theory of coopetition. *Journal of Management*, 44: 2511–2534.

Gnyawali, D. R., Madhavan, R., He, J., & Bengtsson, M. 2016. The competition–cooperation paradox in inter-firm relationships: A conceptual framework. *Industrial Marketing Management*, 53: 7–18.

Gnyawali, D.R., & Park, B.J. 2009. Co-opetition and technological innovation in small and medium-sized enterprises: A multilevel conceptual model. *Journal of Small Business Management*, 47: 308–330.

Grant, R. M. 1996a. Prospering in dynamically-competitive environments: Organizational capability as knowledge integration. *Organization Science*, 7: 375–387.

Grant, R. M. 1996b. Toward a knowledge-based theory of the firm. *Strategic Management Journal*, 17: 109-122.

Grant, R. M., & Baden-Fuller, C. 2004. A knowledge accessing theory of strategic alliances. *Journal of Management Studies*, 41: 61–84.

Greve, H. R., Mitsuhashi, H., & Baum, J. A. 2013. Greener pastures: Outside options and strategic alliance withdrawal. *Organization Science*, 24: 79-98.

Gulati, R. 1999. Network location and learning: The influence of network resources and firm capabilities on alliance formation. *Strategic Management Journal*, 20: 397-420.

Gulati, R., Wohlgezogen, F., & Zhelyazkov, P. 2012. The two facets of collaboration: Cooperation and coordination in strategic alliances. *Academy of Management Annals*, 6: 531-583.

Hamel, G. 1991. Competition for competence and interpartner learning within international strategic alliances. *Strategic Management Journal*, 12: 83–103.

Hoffmann, W., Lavie, D., Reuer, J. J., & Shipilov, A. 2018. The interplay of competition and cooperation. *Strategic Management Journal*, 39: 3033–3052.

Inkpen, A. C. (2000). Learning through joint ventures: A framework of knowledge acquisition. *Journal of Management Studies*, 37: 1019-1044.

Inkpen, A. C., & Tsang, E. W. 2007. Learning and strategic alliances. *Academy of Management Annals*, 1: 479–511.

Kale, P., & Singh, H. 2007. Building firm capabilities through learning: The role of the alliance learning process in alliance capability and firm-level alliance success. *Strategic Management Journal*, 28: 981–1000.

Khanna, T. 1998. The scope of alliances. *Organization Science*, 9: 340-355.

Khanna, T., Gulati, R., & Nohria, N. 1998. The dynamics of learning alliances: Competition, cooperation, and relative scope. *Strategic Management Journal*, 19: 193–210.

Kirzner, I. M. 1973. *Competition and entrepreneurship*. Chicago: University of Chicago Press.

Kumar, M. S. 2010. Differential gains between partners in joint ventures: Role of resource appropriation and private benefits. *Organization Science*, 21: 232-248.

Kumar, M. S. 2011. Are joint ventures positive sum games? The relative effects of cooperative and noncooperative behavior. *Strategic Management Journal*, 32: 32-54.

Lavie, D. 2006. The competitive advantage of interconnected firms: An extension of the resource-based view. *Academy of Management Review*, 31: 638–658.

Lavie, D. 2007. Alliance portfolios and firm performance: A study of value creation and appropriation in the US software industry. *Strategic Management Journal*, 28: 1187-1212.

Le Roy, F., & Fernandez, A. S. 2015. Managing coopetitive tensions at the working-group level: The rise of the coopetitive project team. *British Journal of Management*, 26: 671-688.

Leiblein, M. J., & Reuer, J. J. 2020. Foundations and Futures of Strategic Management. *Strategic Management Review*, 1: 1-33.

Lewis, M. W. 2000. Exploring paradox: Toward a more comprehensive guide. *Academy of Management Review*, 25: 760-776.

Li, D., Eden, L., Hitt, M. A., Ireland, R. D., & Garrett, R. P. 2012. Governance in multilateral R&D alliances. *Organization Science*, 23: 1191-1210.

Lippman, S. A., & Rumelt, R. P. 1982. Uncertain imitability: An analysis of interfirm differences in efficiency under competition. *Bell Journal of Economics*, 418-438.

Lundgren-Henriksson, E. L., & Kock, S. 2016. A sensemaking perspective on coopetition. *Industrial Marketing Management*, 57: 97-108.

Maitlis, S., & Sonenshein, S. 2010. Sensemaking in crisis and change: Inspiration and insights from Weick (1988). *Journal of Management Studies*, 47: 551-580.

Oxley, J. E., & Sampson, R. C. 2004. The scope and governance of international R&D alliances. *Strategic Management Journal*, 25(8-9): 723-749.

Park, B. J., Srivastava, M. K., & Gnyawali, D. R. 2014. Walking the tight rope of coopetition: Impact of competition and cooperation intensities and balance on firm innovation performance. *Industrial Marketing Management*, 43: 210–221.

Park, S. H., & Russo, M. V. 1996. When competition eclipses cooperation: An event history analysis of joint venture failure. *Management Science*, 42: 875–890.

Park, S. H., & Ungson, G. R. 2001. Interfirm rivalry and managerial complexity: A conceptual framework of alliance failure. *Organization Science*, 12: 37-53.

Parkhe, A. 1993. Strategic alliance structuring: A game theoretic and transaction cost examination of interfirm cooperation. *Academy of Management Journal*, 36: 794-829.

Parmigiani, A., & Rivera-Santos, M. 2011). Clearing a path through the forest: A meta-review of interorganizational relationships. *Journal of Management*, 37: 1108-1136.

Peteraf, M. A. 1993. The cornerstones of competitive advantage: a resource-based view. *Strategic Management Journal*, 14: 179-191.

Porter, M. E. 1985. *Competitive Advantage*. New York: Free Press.

Rai, R. K. 2016. A co-opetition based approach to value creation in interfirm alliances: Construction of a measure and examination of its psychometric properties. *Journal of Management*, 42: 1663–1699.

Raza-Ullah, T. 2018. Experiencing the paradox of coopetition: A moderated mediation framework explaining the paradoxical tension–performance relationship. *Long Range Planning*. In Press.

Raza-Ullah, T. 2020. Experiencing the paradox of coopetition: A moderated mediation framework explaining the paradoxical tension–performance relationship. *Long Range Planning*, 53.

Raza-Ullah, T., Bengtsson, M., & Gnyawali, D. R. 2020. The nature, consequences, and management of emotions in interfirm paradoxical relationships—A conceptual framework. *Scandinavian Journal of Management*, 36: 101-127.

Ring, P. S., & Van de Ven, A. H. 1994. Developmental processes of cooperative interorganizational relationships. *Academy of Management Review*, 19: 90-118.

Ritala, P. 2012. Coopetition strategy–when is it successful? Empirical evidence on innovation and market performance. *British Journal of Management*, 23: 307–324.

Ritala, P., & Hurmelinna-Laukkanen, P. 2009. Whats in it for me? Creating and appropriating value in innovation-related coopetition. *Technovation*, 29: 819–828.

Ritala, P., & Hurmelinna-Laukkanen, P. 2013. Incremental and radical innovation in coopetition—The role of absorptive capacity and appropriability. *Journal of Product Innovation Management*, 30: 154–169.

Ritala, P., & Tidström, A. 2014. Untangling the value-creation and value-appropriation elements of coopetition strategy: A longitudinal analysis on the firm and relational levels. *Scandinavian Journal of Management*, 30: 498-515.

Ritala, P., Hurmelinna-Laukkanen, P. 2018. 'Dynamics of coopetitive value creation and appropriation' In Fernandez AS, Chiambaretto P, Le Roy F, Czakon W. *The Routledge Companion to Coopetition Strategies*.

Schreiner, M., Kale, P., & Corsten, D. 2009. What really is alliance management capability and how does it impact alliance outcomes and success? *Strategic Management Journal*, 30: 1395-1419.

Segrestin, B. 2005. Partnering to explore: The Renault–Nissan Alliance as a forerunner of new cooperative patterns. *Research Policy*, 34(5), 657-672.

Smith, W. K., & Lewis, M. W. 2011. Toward a theory of paradox: A dynamic equilibrium model of organizing. *Academy of Management Review*, 36: 381-403.

Smith, W. K., & Tushman, M. L. 2005. Managing strategic contradictions: A top management model for managing innovation streams. *Organization Science*, 16: 522-536.

Stuart, T. E. 2000. Interorganizational alliances and the performance of firms: a study of growth and innovation rates in a high-technology industry. *Strategic Management Journal*, 21: 791-811.

Tidström, A. 2018. ‘Coopetitive tensions’ In Fernandez AS, Chiambaretto P, Le Roy F, Czakon W. *The Routledge Companion to Coopetition Strategies*.

Tidström, A., Ritala, P., & Lainema, K. 2018. Interactional and procedural practices in managing coopetitive tensions. *Journal of Business & Industrial Marketing*.

Wall Street Journal 2016. Suzuki pays damages to Volkswagen, settling dispute. February 10. Retrieved March 2021: https://www.wsj.com/articles/suzuki-pays-damages-to-volkswagen-settling-dispute-1455107774

Wall Street Journal, 2009. VW to buy 20% stake in Suzuki. December 10. Retrieved March 2021: https://www.wsj.com/articles/SB10001424052748704240504574585094293167388

Wall Street Journal, 2011. Samsung Electronics Ends LCD Venture with Sony. December 27. Retrieved September 2020: https://www.wsj.com/articles/SB10001424052970203391104577121761003753118

Wassmer, U. 2010. Alliance portfolios: A review and research agenda. *Journal of Management*, 36: 141-171.

Zheng, Y., & Yang, H. 2015. Does familiarity foster innovation? The impact of alliance partner repeatedness on breakthrough innovations. *Journal of Management Studies*, 52: 213–230.

Zollo, M., Reuer, J. J., Singh, H. 2002. Interorganizational routines and performance in inter-firm alliances. *Organization Science*, 13: 701–713.