



Tactical Interdependence and Institutionalized Trust: The Unrecognized Risks of Joint Ventures Among Competitors

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Tactical Interdependence and Institutionalized Trust: The Unrecognized Risks of Joint Ventures Among Competitors

Michael A. Rabkin

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“Either we trust each other or we don’t trust each other. . . . I have no problem with audits. . . . But in the end it comes down to: Do you trust or don’t you trust.”

—Terry Wilson, an ADM Executive, to fellow members of an international price-fixing cartel, at a meeting to set prices and production volumes in the lysine market¹

I. INTRODUCTION

In December 2001, manufacturers of dynamic random access memory chips (“DRAM”) were entrenched in a global price-fixing conspiracy that spanned more than three years before a criminal investigation by the United States Department of Justice broke up the cartel.² In spite of their collusion, however, the DRAM industry was struggling.³ The CEO of Infineon, one of the major DRAM manufacturers, described “vicious market pricing” and falling DRAM prices, comparing the situation to an “Edgar Allan Poe horror story.”⁴ Amid this turmoil, DRAM manufacturers turned to each other—their fellow competitors-cum-co-conspirators—and began discussing the creation of formal joint ventures among themselves.⁵

From a classical economic perspective, it might seem paradoxical that these manufacturers, who had already established collusive agreements on price, would initiate joint ventures among themselves. After all, joint ventures would presumably create new, additional sources of

1. KURT EICHENWALD, *THE INFORMANT: A TRUE STORY* 216 (2000) [hereinafter EICHENWALD, *THE INFORMANT*].

2. Laurie J. Flynn, *Samsung to Pay Large Fine in Price-Fixing Conspiracy*, N.Y. TIMES, Oct. 14, 2005, at C3.

3. Will Wade, *Micron Maintains Focus Amid Shaky DRAM Market*, ELEC. ENG’G TIMES, Nov. 5, 2001 (describing the DRAM market as “already hobbled by overcapacity, with demand slipping and prices sliding even more”).

4. *One-on-One: For Infineon, DRAM is a Matter of Survival*, ELECS. SUPPLY & MFG., Dec. 14, 2001 (quoting Ulrich Schumacher, CEO of Infineon).

5. *Id.* According to Infineon CEO Schumacher, “[t]he semiconductor officials of Infineon and Toshiba ha[d] a meeting of the minds on the broad concept of how a joint venture might work. We have to flesh it out . . .” *Id.* In the same interview, Schumacher expressed doubts about the economic rationale behind “ongoing negotiations between Micron Technology and Hynix Technology,” two other major DRAM manufacturers, “to form some kind of DRAM alliance.” *Id.*

supply, and thus add capacity to an industry that, in its own view, was already plagued by low prices and oversupply.⁶

On the other hand, members of a price-fixing cartel are always subject to pressures to cheat on their collusive agreement, and joint ventures among the cartel members may have provided a device to control cheating by cultivating trust among them. Falling prices in the DRAM market suggest that either demand was slipping precipitously or, more likely, the cartel was ineffective. Manufacturers may have been cheating or “chiseling” on their price-fixing agreement, selling below the minimum prices upon which the cartel had agreed. More significantly, the cartel may have lacked an effective mechanism for punishing cheaters. In essence, the cartel—despite the mutual assurances exchanged by its members—likely suffered from a lack of trust.⁷ The creation of joint ventures among the manufacturers could have produced exactly the sort of trust the DRAM cartel needed in order to maximize the manufacturers’ supra-competitive profits and evade prosecution.

This article considers how some joint ventures among competitors may constitute trust-facilitating devices—mechanisms that establish, maintain, and reinforce trust between competitors in a concentrated market. Three conditions make a joint venture particularly effective as a trust-facilitating device. First, joint ventures often involve an upfront investment of considerable size by the joint venture partners. Depending on the structure and operational plans of the joint venture, this investment may be difficult or impossible to recover if the venture is terminated by its parents. That sunk cost provides each parent with some degree of control over its competitors’ assets, which can serve both as an affirmative manifestation of trust between the competitors and as a looming punitive mechanism, much like posting a bond or

6. See *id.* Indeed, the interviewer asked Infineon CEO Schumacher, “Aren’t you concerned the additional capacity will flood an already glutted DRAM market with even more chips, just when supply and demand are starting to come into balance?” *Id.*; see also 13 HERBERT HOVENKAMP, *ANTITRUST LAW: AN ANALYSIS OF ANTITRUST PRINCIPLES AND THEIR APPLICATION* ¶ 2122b, at 132 (2d ed. 2005) [hereinafter 13 HOVENKAMP, *ANTITRUST LAW*] (noting that, “to the extent [a] joint venture involves a new plant, it increases market production capacity whether or not it increases the number of firms”).

7. The fact that one of the major DRAM manufacturers defected to the Justice Department in exchange for immunity from criminal prosecution strongly suggests that the DRAM cartel suffered from a lack of trust. See Laurie J. Flynn, *34 States to Sue Chip Makers, Charging Broad Price Fixing*, N.Y. TIMES, July 14, 2006, at C8 (noting that “Micron agreed to cooperate with investigators in exchange for amnesty from criminal charges”); see also *infra* Part II.B.3.b (discussing how the Justice Department’s corporate amnesty program creates a prisoner’s dilemma which generally can be solved only if sufficiently high levels of trust exist among cartel members).

holding a “hostage.”⁸ Significant mutual investment may thus deter partners from competing with each other outside the scope of the joint venture.

Second, a joint venture may establish a management team composed of executives from each of its parents and thus create an indirect interlocking directorate.⁹ On the one hand, members of a price-fixing cartel are constantly subject to pressures to cheat on their collusive agreement or defect to law enforcement agencies in exchange for leniency. On the other hand, as co-directors of a joint venture, executives from each of the cartel members may form business and interpersonal relationships that overcome the powerful incentives to cheat or defect. Such relationships may also encourage tacit collusion among joint venture managers who are not themselves participants in explicit price-fixing activity.

Third, the joint venture’s mission may be somewhat amorphous or open-ended, and thereby create a substantial ongoing risk shared by the parents, who are mutually responsible for, and affected by, the venture’s success or failure. This may be the case when the activities and operations of the joint venture are not strictly articulated at the time of its formation (as is particularly common for research and development joint ventures) or when the management of the joint venture is not wholly independent from that of its parents (which is often the case). When this third trust-facilitating device is present, it may be intertwined with the first and second. Although each of these three factors may be identified as an independent feature of a joint venture, they are all closely-related and lead to a common anticompetitive risk: the facilitation of trust between competitors.

Modern corporate executives have an increasingly firm understanding of the trust-facilitating benefits of forming a joint venture with one’s competitors. For more than a decade now, business-school academics and the business media have extolled the virtues of “co-opetition,” advocating a role for cooperation between competitors and warning that unrestrained competition is a mutually destructive force.¹⁰ As the authors of a widely-cited book entitled *Co-opetition* put it: “Until your rivals live in glass houses, expect them to throw

8. See, e.g., Ian Ayres, *How Cartels Punish: A Structural Theory of Self-Enforcing Collusion*, 87 COLUM. L. REV. 295, 298, 310–12 (1987) (suggesting that “joint ventures and product exchanges could serve as hostages that commit firms to more effective punishment even before a breach occurs”).

9. See *infra* notes 114–116 and accompanying text (explaining distinction between indirect versus direct interlock).

10. ADAM M. BRANDENBURGER & BARRY J. NALEBUFF, *CO-OPETITION: A REVOLUTIONARY MINDSET THAT COMBINES COMPETITION AND COOPERATION AND THE GAME THEORY STRAT-*

stones. Thus, it's in your interest to help them build a glass house"¹¹ In other words, "It's important that competitors have something to lose from getting into a price war."¹² By forming a joint venture with its competitors, a company not only helps them build a glass house but also moves some of its own family members in under the same roof—in effect, sharing the glass house.

The trust-facilitating features of joint ventures among competitors are inherently harmful to competition, and in some cases, such anticompetitive harm may outweigh the procompetitive benefits of a collaboration. Where a cartel already exists, as in the DRAM industry example above, joint ventures among competitors may increase the longevity and effectiveness of the conspiracy. Even if there is no existing cartel at the time the joint venture is formed, however, the trust-facilitating effects of a joint venture among competitors may promote or enable the development of a cartel. Likewise, even if competitors never enter into an explicit cartel agreement, a joint venture among competitors may nonetheless facilitate trust and thus encourage tacit collusion. This last possibility is perhaps most insidious, for unlike situations in which an explicit agreement exists, tacit collusion is unlikely to be challenged by antitrust enforcers or condemned by courts under current antitrust law.

Existing antitrust doctrine fails to consider the risks of trust-facilitating devices.¹³ Current antitrust law generally focuses only on whether a joint venture will (1) eliminate a competitor, thus having an anticompetitive effect comparable to that of a merger, or (2) provide a cover for collusive conduct or collusion-facilitating devices, such as information sharing, thus having an anticompetitive effect comparable to that of a price-fixing cartel. The trust-facilitating effects of joint ventures, however, neither eliminate competitors nor provide a "cover" for collusive conduct; rather, they enable and reinforce *effective* collusion—collusion that is likely to result in supra-competitive profits for cartel members.

EGY THAT'S CHANGING THE GAME OF BUSINESS (1996) [hereinafter BRANDENBURGER & NALEBUFF, CO-OPERATION].

11. *Id.* at 88–89.

12. *Id.* at 137.

13. This Article will focus on the *Antitrust Guidelines for Collaborations Among Competitors* issued jointly by the Federal Trade Commission and the United States Department of Justice, as well as other frameworks proposed by antitrust scholars for analyzing joint ventures. See FED. TRADE COMM'N & U.S. DEP'T OF JUSTICE, ANTITRUST GUIDELINES FOR COLLABORATIONS AMONG COMPETITORS (Apr. 2000) [hereinafter FTC-DOJ, COLLABORATION GUIDELINES], available at <http://www.ftc.gov/os/2000/04/ftcdojguidelines.pdf>; see also Thomas A. Piraino, Jr., *A Proposed Antitrust Approach to Collaborations Among Competitors*, 86 IOWA L. REV. 1137 (2001).

Part II of this Article discusses the anticompetitive consequences of trust among competitors and highlights the trust-facilitating devices that may be created by joint ventures among competitors in concentrated markets. Part III discusses "co-opetition" and related game-theory concepts that are increasingly emphasized in modern corporate strategy,¹⁴ focusing particularly on the book *Co-opetition*.¹⁵ Part IV discusses the treatment of joint ventures under modern antitrust doctrine generally, as well as the *Antitrust Guidelines for Collaborations Among Competitors* ("*Collaboration Guidelines*" or "*Guidelines*") jointly issued by the Federal Trade Commission and the United States Department of Justice.¹⁶ That section argues that neither the broader antitrust doctrine regarding joint ventures nor the *Guidelines* properly recognize the trust-facilitating risks of joint ventures among competitors. Finally, Part V proposes modifications to the *Guidelines* that would expose the anticompetitive risks posed by trust-facilitating devices in joint ventures among competitors.

II. CREATING TACTICAL INTERDEPENDENCE THROUGH JOINT VENTURES: TRUST-FACILITATING DEVICES

A joint venture between competitors can do more than merely provide a "cover" for a cartel or a conduit for collusive conduct. Far beyond the superficial, a joint venture can undergird and bolster trust between competitors, redefining their self-interests and motivations, and thus (1) reinforce the effectiveness of an existing cartel, (2) foster the creation of a cartel where none existed before, or (3) encourage tacit collusion in the absence of explicit agreements.

A. *Understanding the Anticompetitive Risks of Trust-Facilitating Devices*

Although antitrust doctrine regarding joint ventures is not fully developed, courts and commentators have long recognized that joint ventures between competitors may mask anticompetitive conduct or communication. As early as 1897, the Supreme Court characterized the railroad joint ventures at issue in *United States v. Trans-Missouri Freight Association*¹⁷ and *United States v. Joint Traffic Association*¹⁸ as scarcely more than fronts for cartels which, lacking a lawful purpose,

14. BRANDENBURGER & NALEBUFF, CO-OPETITION, *supra* note 10.

15. *Id.*

16. FTC-DOJ, COLLABORATION GUIDELINES, *supra* note 13.

17. 166 U.S. 290 (1897).

18. 171 U.S. 505 (1898).

should be dissolved by antitrust decree.¹⁹ In 1959, Professors Kaysen and Turner noted that while “[t]here has been surprisingly little law on joint ventures . . . the sketchy existing law on joint ventures seems to indicate . . . [that] . . . a joint venture should be condemned on proof of specific intent to use it as a vehicle for eliminating competition[.]”²⁰

Even in cases where there is no evidence that the purpose of the collaboration is to reduce competition, antitrust scholars have recognized the potential for joint ventures among competitors to (1) “create what amounts to a single-firm monopoly” or (2) “facilitate collusion.”²¹ A joint venture that integrates the participants so completely that it amounts to a single-firm monopoly can be examined like a merger and enjoined under the same legal standards.²² Thus, a joint venture among competitors (such as a production joint venture) that essentially amounts to a single-firm monopoly can be analyzed under the principles of merger analysis, a well-developed area of antitrust law.²³

Although it is widely-accepted, the notion that a joint venture among competitors may facilitate collusion is not well-understood or developed in antitrust law. The risk that such a venture will facilitate collusion in markets outside the scope of the venture’s operations is known as “spillover.”²⁴ Chief among the recognized spillover risks is the concern that, “[t]hrough their association in the venture, the members may gain access to information which makes anticompetitive conduct more likely.”²⁵ One commentator suggests, for example, that a “partner to a research and development joint venture . . . may be able to learn details of their competitors’ production costs or sales prices which facilitate collusion at the production or marketing levels.”²⁶ These information-sharing risks are currently recognized in the *Col-*

19. 7 PHILLIP E. AREEDA & HERBERT HOVENKAMP, *ANTITRUST LAW: AN ANALYSIS OF ANTITRUST PRINCIPLES AND THEIR APPLICATION* ¶ 1478a, at 319 (2d ed. 2003) [hereinafter 7 AREEDA & HOVENKAMP, *ANTITRUST LAW*] (citing *Trans-Missouri*, 166 U.S. 290; *Joint-Traffic*, 171 U.S. 505).

20. CARL KAYSEN & DONALD F. TURNER, *ANTITRUST POLICY: AN ECONOMIC AND LEGAL ANALYSIS* 137 (1959).

21. 13 HOVENKAMP, *ANTITRUST LAW*, *supra* note 6, ¶ 2121a, at 125.

22. 7 AREEDA & HOVENKAMP, *ANTITRUST LAW*, *supra* note 19, ¶ 1478a, at 319.

23. Indeed, Judge Posner went so far as to say that, “[f]or the time being, the history of merger doctrine is at an end.” RICHARD A. POSNER, *ANTITRUST LAW* 132 (2d ed. 2001).

24. *See, e.g.*, KAYSEN & TURNER, *supra* note 20, at 138 (noting the risk that “cooperation in the joint venture will spill over into collateral restrictive behavior among the joint venturers, simply as a matter of close association”); Piraino, *supra* note 13, at 1174 (noting that “[j]oint ventures can also facilitate ‘spill over’ collusion among their members in markets outside the scope of a venture’s operation”).

25. Piraino, *supra* note 13, at 1174.

26. *Id.*

laboration Guidelines, which note that a reviewing agency will “evaluate the extent to which competitively sensitive information concerning markets affected by the collaboration likely would be disclosed.”²⁷

The *Guidelines* also recognize a number of other factors relevant to the incentive of the joint venture partners to compete with each other.²⁸ For example, the *Guidelines* encourage assessment of “each participant’s financial interest in the collaboration and its potential impact on the participant’s incentive to compete independently *with the collaboration*.”²⁹ The *Guidelines* do not address, however, a closely-related risk that is at the focus of this Article: each partner’s shared financial interest in the joint venture may reduce its incentive to compete with the other partners in markets *outside* the scope of the joint venture’s operations.

Scholars have long held a skeptical view about the potential anticompetitive effects of a joint venture on markets beyond the scope of the venture’s operations. Indeed, much of the existing scholarship on joint ventures views the risks of spillover effects as essentially limited to markets in which both the joint venture partners and the venture itself are involved.³⁰ Commentators often rely on the argument that, in itself, a joint venture between competitors does not present any special antitrust problems because, “[a]fter all, any group of firms can rent a hotel room and purchase a box of cigars.”³¹ In other words, they suggest, antitrust laws need not specifically address the intimacy-enhancing aspects of joint ventures because private communications among competitors are legal.³²

27. FTC–DOJ, *COLLABORATION GUIDELINES*, *supra* note 13, § 3.34(e), at 21.

28. *Id.* § 3.34, at 18–21; *see also infra* Part IV (discussing how modern antitrust analysis of joint ventures fails to recognize the risks of trust-facilitating devices).

29. FTC–DOJ, *COLLABORATION GUIDELINES*, *supra* note 13, § 3.34(c), at 20 (emphasis added). The *Guidelines* note that, “[i]n general, the greater the financial interest in the collaboration, the less likely is the participant to compete with the collaboration.” *Id.*

30. Professors Kaysen and Turner went so far as to argue that “any case in which there is no close relation between the product of the venture and any of the products of the participants” should be deemed “presumptively lawful” KAYSEN & TURNER, *supra* note 20, at 138. They suggested the anticompetitive risks in such a situation are as negligible as those in a case where “neither the joint venture, nor its participants (individually or collectively), nor the venture plus participants, has substantial market power” *Id.*

31. Stephen V. Borse, *Joint Ventures: Practices in Search of Principles*, 915 PLUCORP 781, 802 (1996).

32. For example, executives at competing firms may be friends who have dinner with each other, or belong to common social or industry organizations where they fraternize; but unless and until this conduct involves anticompetitive agreements between the competitors, it is likely to be perfectly legal. *See* CHARLES J. GOETZ & FRED S. MCCHESENEY, *ANTITRUST LAW: INTERPRETATION AND IMPLEMENTATION* 236 (2006) (“A violation of §1 of the Sherman Act clearly contemplates that one must conspire or agree with someone else and . . . there are limits to the use of circumstantial evidence in the proof of an agreement.”).

Of course, if a joint venture is involved in markets other than those of its parents, then the joint venture agreement may *ostensibly* have nothing to do with the markets in which the joint venture's parents compete with each other. Antitrust commentators have largely failed to recognize, however, that a joint venture may threaten competition between the parents, irrespective of the particular markets in which the venture is involved. In other words, the trust-facilitating effects of a joint venture may harm competition among the venture's parents even if the joint venture is structured in such a way that it precludes the long-recognized risks of joint ventures (such as information sharing).³³

B. *Applying Game Theory and Principles of Trust to the Analysis of Joint Ventures Among Competitors*

1. Defining "Trust"

Although the term "trust" is an obvious component of the term "antitrust," the antitrust field has rarely been concerned with the sort of trust that is the focus of this Article. The "trust" to which the term "antitrust" refers is, in the words of the *Oxford English Dictionary*, "a body of producers or traders . . . organized to reduce or defeat competition, lessen expenses, and control production and distribution for their common advantage."³⁴ This concept of the monopolistic trust is closely related to the broader legal term "trust," which is generally concerned with fiduciary relationships.³⁵ Indeed, the framers of the legislation that gave rise to the field of antitrust were largely "concerned with the 'trust' problem,"³⁶ which referred to the anticompetitive combinations prevalent at the turn of the twentieth century—the steel trust, the railroad trust, and the oil trust, among others.³⁷

33. The *Collaboration Guidelines* already recognize, for example, the risk that the parents of a joint venture may "shar[e] . . . information related to a market in which the collaboration operates or in which the participants are . . . competitors." FTC-DOJ, *COLLABORATION GUIDELINES*, *supra* note 13, § 3.31(b), at 15.

34. See *OXFORD ENGLISH DICTIONARY* (2d ed. 1989) (defining "antitrust" as "opposed to trusts . . . or similar monopolistic combinations" and defining "trust," in the context of antitrust, as "[a] body of producers or traders in some class of business, organized to reduce or defeat competition, lessen expenses, and control production and distribution for their common advantage; spec. such a combination of commercial or industrial companies, with a central governing body of trustees which holds a majority or the whole of the stock of each of the combining firms, thus having a controlling vote in the conduct and operation of each").

35. *BLACK'S LAW DICTIONARY* 1546 (8th ed. 1999) (providing multiple definitions of "trust" as a legal term, such as "a property interest held by one person (the *trustee*) at the request of another (the *settlor*) for the benefit of a third party (the *beneficiary*)").

36. POSNER, *supra* note 23, at 34.

37. See, e.g., *Charges Against Members of the House and Lobby Activities of the National Association of Manufacturers of the United States and Others: Hearings Before the Select Com-*

Of course, the fiduciary of a trust owes the “duty of trust” (as well as the duties of good faith and loyalty) to the trust’s beneficiary.³⁸ But the legal notion of trust is distinct from the more common usage of the word with which this Article is concerned. The *Oxford English Dictionary* provides as its first definition of the word “trust”: “[c]onfidence in or reliance on some quality or attribute of a person or thing, or the truth of a statement.”³⁹ As used in this Article, the term “trust-facilitating” refers to this broader, general conception of trust.

Professor Cross defines trust as “the voluntary ceding of control over something valuable to another person or entity, based upon one’s faith in the ability and willingness of that person or entity to care for the valuable thing.”⁴⁰ As discussed below, this is precisely the situation that a joint venture between competitors may entail.⁴¹ This Article will thus adopt Professor Cross’s definition of trust as a general working definition.

2. The Increasing Use of Trust as a Substitute for Formal Agreements

Trust is increasingly understood among corporate executives as a lower-cost, higher-value substitute for formal agreements. As Professor Salbu notes, “[t]rust among collaborators has been found to support mutual learning, as well as both effectiveness and longevity of alliance relations.”⁴² While contracts “provide customized dispute resolution functions, sometimes in anticipation of the manifestation of only a few conflicts or disagreements,” trust “strengthen[s] the ability of transactors to resolve unanticipated disputes without anticipatory fixation of all rights and duties, or anticipatory creation of an elaborate adjudicatory system.”⁴³ Salbu thus suggests that a move away from formal agreements may be motivated by the fact that “[s]ocial

mittee of the House of Representatives, 63d Cong. 1239 (1913). As noted by Robert H. Bork, “the word ‘trust’ originally gained currency to describe anticompetitive combinations because the trust device was used to gather industries or large parts of them under single ownership or control.” Robert H. Bork, *Legislative Intent and the Policy of the Sherman Act*, 9 J.L. & ECON. 7, 21 (1966).

38. BLACK’S LAW DICTIONARY 658 (defining the term “fiduciary”); see also RESTATEMENT (SECOND) OF TRUSTS § 170 (1959) (defining the “duty of loyalty”).

39. See OXFORD ENGLISH DICTIONARY (2d ed. 1989).

40. Frank B. Cross, *Law and Trust*, 93 GEO. L. J. 1457, 1461 (2005).

41. See *infra* note 98 and accompanying text.

42. Steven R. Salbu, *The Decline of Contract As a Relationship Management Form*, 47 RUTGERS L. REV. 1271, 1311–12 (1995).

43. *Id.*

processes like trust are less expensive than formal governance mechanisms because they exploit economies of scope.”⁴⁴

Salbu’s work indicates that modern corporate executives increasingly understand and appreciate the potential efficiencies offered by cultivating trust in business relationships.⁴⁵ As he explains, “[m]ore recent trends in business strategy are moving away from the adversarial view of transactions. Accordingly, degrees of both intraindustry and interindustry competition are being supplanted by cooperation.”⁴⁶ Indeed, Salbu notes that “strategic thinking in the 1990s has emphasized to an unprecedented degree the competitive advantage to be gained from cooperative rather than competitive micro-level transactions.”⁴⁷ This trend is discussed in greater detail below in Part III, which considers how one popular business-press book, *Co-opetition*,⁴⁸ encourages executives to maximize economic gains by fostering collaborative relationships with their competitors. As modern business strategy increasingly embraces trust as a viable alternative to formal agreements, the potential trust-facilitating effects of joint ventures become more apparent to—and thus more likely to be exploited by—corporate executives.

3. Trust Provides the Solution to the Central Challenges Faced by Cartels

The central problems faced by cartels can broadly be characterized as variations of the “prisoner’s dilemma,” which exists when “two parties pursue their own individual interests and act in a rationally selfish manner, which results in both parties ending up in a worse position than if they had cooperated and pursued the group’s interests instead of their own.”⁴⁹ The presence of such a dilemma will thus generally result in the “prisoners”—in this context, the cartel members—being worse off than they would be in the absence of that dilemma. When a prisoner’s dilemma disturbs the functioning or effectiveness of a price-fixing cartel, the cartel members’ customers—or, more broadly speaking, consumers—will benefit.

44. *Id.*

45. *Id.* at 1299; see also Michael J. Smitka, *Contracting Without Contracts: How the Japanese Manage Organizational Transactions*, THE LEGALISTIC ORGANIZATION 91, 94–96 (1994) (noting the growing emphasis on trust in transactions).

46. Salbu, *supra* note 42, at 1299.

47. *Id.* at 1300.

48. BRANDENBURGER & NALEBUFF, *CO-OPETITION*, *supra* note 10.

49. Christopher R. Leslie, *Antitrust Amnesty, Game Theory, and Cartel Stability*, 31 J. CORP. L. 453, 455 (2006) [hereinafter Leslie, *Antitrust Amnesty*].

In the context of a price-fixing cartel, there are two separate prisoner's dilemmas that each cartel member may face.⁵⁰ First, each cartel member faces a dilemma about whether or not to cheat on the cartel agreement by producing more than its allotted output or selling at prices beneath those fixed by the cartel.⁵¹ Second, each co-conspirator could choose to expose the existence of the cartel to antitrust enforcement authorities in exchange for immunity from prosecution.⁵² This second quandary is closer to the classic conception of the prisoner's dilemma, but both may be "solved" by the establishment of trust among the members of a cartel.⁵³ Cartel members also face a third dilemma (although it is not, strictly speaking, a prisoner's dilemma) about how many individuals within each firm to involve in the cartel.⁵⁴ As discussed below, the trust-facilitating devices engendered by certain joint ventures may enable and undergird collusion among competitors by effectively solving the three dilemmas cartels face.

a) The First Prisoner's Dilemma: To Cheat or Not to Cheat?

The first prisoner's dilemma that each member of a price-fixing cartel faces is whether to cheat co-conspirators by deviating from the cartel agreement.⁵⁵ In the short-term, the cheater increases its supra-competitive profits and decreases those of the non-cheaters. Thus, it may be in the interest of a cartel member to cheat if that member believes its co-conspirators are cheating; otherwise, the net effect of the cartel may be to cede volume and customers to the cheaters. In the long-run, devious behavior destabilizes the cartel and ultimately reduces all of the members' supra-competitive profits.⁵⁶

In theory, a cartel may solve the prisoner's dilemmas through contract, force, or trust.⁵⁷ While neither formal contracts nor force are

50. *Id.* at 463.

51. *Id.*

52. *Id.*

53. *Id.* at 462.

54. This third dilemma is proposed by this Author and was not suggested by Professor Leslie.

55. Cheating may take various forms, but can often be described as "chiseling": selling at prices below the minimum levels agreed upon by the cartel. Depending on the particular anticompetitive agreements made by the cartel, a member may also cheat by producing more product than agreed upon, selling to customers other than those agreed upon, selling outside of the territorial allocation agreed upon, or providing value-enhancing benefits (such as rebates or better-quality product) to their customers. See GOETZ & MCCHESENEY, *supra* note 32, at 84-86 (discussing various potential methods by which a cartel member might cheat on a price-fixing agreement).

56. See Leslie, *Antitrust Amnesty*, *supra* note 49, at 463.

57. *Id.* at 461.

likely to be viable options for a real-world price-fixing cartel,⁵⁸ the establishment of some threshold level of trust among cartel members is an achievable and potentially potent solution to the prisoner's dilemma.⁵⁹ In other words, "[b]ecause the solution to the prisoner's dilemma requires people to cooperate when their individual self-interest is to defect, it is essentially a game of trust."⁶⁰

In addition to its theoretical appeal, empirical studies also support the notion that trust provides a solution to the prisoner's dilemmas.⁶¹ A number of prisoner's dilemma simulation experiments have actually used a price-fixing-cartel scenario as a factual premise.⁶² These studies suggest that trust between competitors can be established through a recent past pattern of cooperative behavior which promotes similar behavior in the future.⁶³

Although trust may provide the most intuitive and promising solution to the prisoner's dilemmas, trust can prove to be elusive for members of a cartel for at least two reasons. First, even if the cartel members make solemn pledges of loyalty to each other, cheating is often difficult to detect in the short run.⁶⁴ In other words, a track record of recent past cooperative behavior, which is an effective solution

58. On one hand, formal contracts among cartel members would "[permit] the parties to commit to cooperation and [put] teeth into these promises through the imposition of penalties against a party who defects." *Id.* On the other hand, courts are unlikely to enforce a contract that constitutes an illegal anticompetitive agreement among competitors. *Id.* Thus, formal agreements such as contracts are only a viable solution to the prisoner's dilemma to the extent that cartels can enforce such agreements through their own enforcement mechanisms—that is, without the aid of the courts and the legal system. *Id.*

Using force as a solution to the prisoner's dilemma—for example, by implementing a "kill the [cheater]" strategy—is also an unlikely option for price-fixing conspiracies. *Id.* While a genuine threat of violence against cheaters might be an effective deterrent to cheating on the price-fixing agreement, the executives who orchestrate cartels have thus far not adopted the sort of physically coercive strategies that one would associate with organized crime. Leslie, *Antitrust Amnesty*, *supra* note 49, at 461-62.

59. *Id.* at 462.

60. *Id.* Indeed, without any level of trust, the prisoner's dilemma would almost certainly result in the failure of the cartel. As Professor Leslie explains, "[t]he worst outcome for a player in a prisoner's dilemma scenario is to cooperate when one's partner defects—often called the sucker outcome." *Id.*

61. See James P. Gahagan & James T. Tedeschi, *Strategy and the Credibility of Promises in the Prisoner's Dilemma Game*, 12 J. CONFLICT RESOL. 224, 226 (1968); Peter Huber, *Competition, Conglomerates, and the Evolution of Cooperation*, 93 YALE L.J. 1147, 1169-72 (1984); Leslie, *Antitrust Amnesty*, *supra* note 49, at 461.

62. See Gahagan & Tedeschi, *supra* note 61, at 226 (describing results of a study of participants in a simulated prisoner's dilemma game, which suggested that greater levels of trust lead to increased levels of cooperation); Huber, *supra* note 61, at 1169-72.

63. See Gahagan & Tedeschi, *supra* note 61, at 226; Huber, *supra* note 61, at 1169-72.

64. Christopher R. Leslie, *Trust, Distrust, and Antitrust*, 82 TEX. L. REV. 515, 611-12 (2004) [hereinafter Leslie, *Trust*].

in the prisoner's dilemma simulation experiments, may be difficult to establish in real-world cartels. Second, even when cheaters are successfully detected, it may be still more difficult for the non-cheating members to effectively punish them.⁶⁵

Even before the enactment of antitrust laws in the 1890s, the innate temptation of cartel members to cheat inspired a myriad of elaborate mechanisms for effectively reducing competition, such as sales quotas and geographic allocations.⁶⁶ The enactment of antitrust laws like the Sherman Act,⁶⁷ however, has made many of these cheating detection and enforcement mechanisms too risky for the modern price-fixing cartel.⁶⁸ For example, a cartel might want to hire a third-party auditor to ensure that members of the cartel are abiding by the terms of the price-fixing agreement.⁶⁹ But to do so would require disclosure of the conspiracy to an additional group of people, thus creating more potential witnesses and sources of information for government enforcement agencies and private plaintiffs.⁷⁰ Modern price-fixing cartels thus may be unable to detect or punish cheating. And even when they do, it can be difficult to punish the cheaters. A cartel may respond to cheating by expelling that member from the cartel or by dissolving the cartel altogether. In either case, however, the effect is less a punishment for the cheater than simply a return to the status quo—a competitive market.⁷¹

65. *Id.* at 615–16.

66. See POSNER, *supra* note 23, at 51. In particular, Posner lists the following mechanisms: “sales quotas, exclusive sales agencies, industry-wide price-fixing committees, the levying of penalties for infractions, provisions for the arbitration of disputes, the establishment of an investigative apparatus, product standardization, allocation of customers, and division of geographical markets.” *Id.*

67. 15 U.S.C. § 1 (2006).

68. See POSNER, *supra* note 23, at 51–52.

69. See EICHENWALD, *THE INFORMANT*, *supra* note 1, at 216; J. Anthony Chavez, *The Carrot and the Stick Approach to Antitrust Enforcement*, 1542 *PLI/CORP* 519, 579 (2006); Leslie, *Trust*, *supra* note 64, at 613.

70. Hiring a third-party auditor would also require the recording and documentation of the cartel's activities, presumably down to the dollars and cents—evidence that would be particularly lethal in any future antitrust actions against the cartel members.

71. In a sense, the cartel members would be punishing themselves to the same extent as the cheater, in that they would be forgoing the possibility of the supra-competitive profits that the cartel was organized to achieve. Alternatively, a cartel might choose to punish a known cheater even more vigorously through punitive mechanisms such as fines or deliberate price wars. See Leslie, *Trust*, *supra* note 64, at 616–19. Price wars, however, carry a drawback similar to that entailed by dissolving the cartel: everyone in the cartel, cheating and non-cheating members alike, shares in the pain of a price war, which eliminates supra-competitive profits and—even worse—may move prices *below* what would otherwise be the competitive level.

Cartel members who are joint venture partners could potentially inflict punishments on each other through their mutual joint venture, and such punishments, if they were ever actually inflicted, might also be felt by both the target of the punishment (i.e., the cheater) and the cartel

b) The Second Prisoner's Dilemma: He Who Defects First Wins

In the criminal antitrust enforcement arena, the United States Department of Justice's Antitrust Division has set up what it calls its "Corporate Leniency Policy" or "Amnesty Program," which gives immunity from criminal prosecution to the first member of a price-fixing cartel to report the cartel to the Antitrust Division.⁷² In exchange for immunity, that first defector must provide its full cooperation to the Antitrust Division's investigation and prosecution of the other cartel members.⁷³ The Amnesty Program has thus created an additional prisoner's dilemma for members of price-fixing cartels.⁷⁴

This dilemma presents a substantial obstacle not only to the ongoing viability of an existing cartel, but also to the formation of a cartel in the first place.⁷⁵ Like the first prisoner's dilemma, the second can

members inflicting the punishment. Compared to cartel members who are not joint venture partners, however, cartel members who are joint venture partners may be able to punish a cheating co-conspirator both (a) exponentially more quickly and (b) to a significantly greater magnitude (in dollar terms). Indeed, using only market-based punitive mechanisms (such as deliberate price wars), it might take cartel members who are not joint venture partners months or years to inflict punishment of a magnitude that could potentially be executed in a matter of days or weeks among cartel members who are also joint venture partners. *See infra* notes 99–103 and accompanying text.

72. See Gary R. Spratling, *Detection and Deterrence: Rewarding Informants for Reporting Violations*, 69 GEO. WASH. L. REV. 798, 799 (2001).

73. *See id.* at 798–800.

74. As one writer in *Forbes* put it: "[a]ttention price-fixers and bid-riggers. Confess and the U.S. Department of Justice will let you off the hook. But hurry! Only one conspirator per cartel." *See id.* at 798 (quoting Janet Novack, *Politics: Fix and Tell*, FORBES, May 4, 1998, at 46).

75. As with the "to cheat or not to cheat" prisoner's dilemma discussed above, *see supra* Part II.B.3.a, the prisoner's dilemma created by the Amnesty Program also has implications for whether the cartel members will achieve the supra-competitive profits they seek. After all, if one member's cooperation with the government leads to the downfall of the cartel, prices would likely return to competitive levels. But the second prisoner's dilemma has the potential to bring about adverse financial consequences of such magnitude that they may dwarf the lost supra-competitive profits. First, the cartel members who are not provided amnesty face the likelihood of large criminal fines against their respective corporations—fines that may run into the hundreds of thousands of dollars, based on a percentage (20–50%) of the volume of commerce that was affected by the conspiracy. *See* Mark A. Cohen, *Corporate Crime and Punishment: An Update on Sentencing Practice in the Federal Courts, 1988–1990*, 71 B.U. L. REV. 247, 275 (1991). Second, *all* of the cartel members face the likelihood of civil suits by private plaintiffs, the customers, who—after the Justice Department completes its prosecutions—can use the criminal cases as ready-made roadmaps and obtain treble damages from each of the cartel members.

The additional threat of *individual* criminal prosecution raises the stakes for the second prisoner's dilemma to an entirely new level. If a member of the cartel defects, then, at worst, the corporation itself can only be fined or, perhaps in an extreme case, dissolved. But, for the individuals who personally participated in the scheme, there is much more to be lost than money. The executives and managers who orchestrated and effected the cartel may be punished not only with criminal fines but also with substantial prison sentences. *See* Scott D. Hammond, Director of Criminal Enforcement, Antitrust Div., U.S. Dep't of Justice, *Fighting Cartels - Why and How?: Lessons Common to Detecting and Deterring Cartel Activity* (Sept. 12, 2000) (transcript

also be solved with trust.⁷⁶ Many of the same dynamics are at play. For example, a past pattern of cooperative behavior may promote such behavior in the future. In the case of the second prisoner's dilemma, however, the issue of detection and punishment is irrelevant. Once one member of the cartel defects—which can happen as suddenly and as swiftly as a phone call to the Justice Department—then the game is over. The need for trust among competitors is thus even more readily apparent in the context of the second prisoner's dilemma, which powerfully counterbalances a competitor's impulse to conspire.⁷⁷ In any case, a high-level of trust among competitors is essentially a prerequisite to the formation and functioning of a modern price-fixing cartel. As discussed below, the trust-facilitating devices created by certain joint ventures provide effective means for overcoming the second prisoner's dilemma.

c) The Intra-Corporate Implications of the Prisoner's Dilemmas:
The Need for Institutionalized Trust

Both the first and second prisoner's dilemmas discussed above give rise to a third, intra-corporate dilemma. Existing antitrust-related literature treats the members of price-fixing cartels as the "players" in the prisoner's dilemma game.⁷⁸ Previous game-theory-oriented analyses of antitrust cartels, experimental studies of simulated prisoner's dilemmas, and the classical conception of the prisoner's dilemma have all largely conceived of the "players" as individuals.⁷⁹ This framework has allowed economic, behavioral, and legal theorists to productively and insightfully analyze the prisoner's dilemma game.⁸⁰

In reality, however, the members of a typical modern price-fixing cartel are major multinational corporations, not individual persons.

available at <http://www.usdoj.gov/atr/public/speeches/6487.htm>). On top of these dire costs, the individuals who acted for the non-defecting members of the cartel are also likely to face the collateral consequences of criminal prosecution—loss of job, loss of voting rights, social stigma, and quite possibly, the inability to ever work again in the industry in which they have made their career.

76. See Leslie, *Trust*, *supra* note 64, at 534–36.

77. The effectiveness of the second prisoner's dilemma is evidenced by the significant number of major international price-fixing cartels that have been successfully prosecuted subsequent to the Justice Department's implementation of the Amnesty Program. See Spratling, *supra* note 72, at 798–99; U.S. Dep't of Justice, Antitrust Div., Protecting and Promoting Competition (2007), <http://www.usdoj.gov/atr/public/222725.htm> (summarizing recent major international cartel cases and fines).

78. See Gahagan & Tedeschi, *supra* note 61; Huber, *supra* note 61, at 1150, 1169–72; Leslie, *Antitrust Amnesty*, *supra* note 49, at 455–57.

79. See Gahagan & Tedeschi, *supra* note 61, at 226; Huber, *supra* note 61, at 1169–72; Leslie, *Antitrust Amnesty*, *supra* note 49, at 455.

80. See studies cited *supra* Parts II.B.3.a–b.

Composed of numerous individuals and decision makers, a corporate “player” is substantially more complex than an individual “player.” This is not to suggest that a corporation is any less rational or self-interested than an individual actor. But, when a “player” is a corporation, it adds a new dimension—a third sort of dilemma—to the prisoner’s dilemmas that cartel members face.

Effectively implementing price-fixing agreements may require that numerous individuals from each member corporation be knowledgeable about, and actively participate in, the cartel.⁸¹ In the international lysine conspiracy in the 1990s, for example, multiple representatives from each of the member corporations attended the cartel meetings.⁸² Similarly, in the DRAM cartel discussed above, at least four individuals at each of three member corporations actively participated in the criminal conspiracy.⁸³ The cartel participants from just one “member”

81. To better understand this third dilemma, it may be helpful to consider the organizational and operational aspects of the companies that have the greatest incentive to join a price-fixing cartel. The markets that are most conducive to antitrust conspiracies—and in which a price-fixing cartel potentially offers the greatest profits—are global commodity product markets that have a small number of producers and significant barriers to entry, such as chemicals, petroleum products, and computer chips. The industries in which these markets are situated are generally composed of a slightly larger, yet still limited, group of large multinational, multi-unit corporations. See Spratling, *supra* note 72, at 820–21 (“The Division has learned that, structurally, international cartels occur in highly concentrated industries with few significant competitors; that small firms on the fringes do not destabilize an effective cartel; that the cartels sell standardized products where price competition is more important than other forms of competition; and that cartels prosper even in the face of large, sophisticated customers.”). At the highest levels, these corporations are generally run by a CEO, a president, and a CFO—each of whom ultimately answers to a board of directors. One step down from the top-level executives, there is often a panel of division presidents and vice-presidents—for example, a president of the industrial products division or a vice president of marketing. Finally, at the middle levels, these corporations may be composed of a multi-tiered hierarchy of individuals responsible for the day-to-day operations in a given product market—for example, production managers, marketing directors, and regional sales managers.

Within these corporations, the inherent complexity associated with the function of an effective price-fixing cartel couples with the complications created by the first and second prisoner’s dilemmas to create a virtual gauntlet of conflicting forces and contradictory motivations. Even without factoring in either of the prisoner’s dilemmas, the members of a cartel likely will need to communicate frequently to fix prices, set volume limitations, and coordinate bids on particular customer’s contracts. While this process is relatively simple in comparison to the challenges created by the prisoner’s dilemmas, this coordination may nonetheless necessitate such frequent inter-member communication that it requires the involvement of more than one individual from each of the member corporations.

82. See EICHENWALD, *THE INFORMANT*, *supra* note 1, at 214 (detailing a meeting in a hotel room attended by the President of ADM and the Vice President of ADM’s Bioproducts Division, as well as multiple executives from each of two competitor corporations, Anjinomoto, Inc. (Japan) and Miwon (Korea)).

83. See *Three Executives Indicted for their Roles in the DRAM Price-Fixing & Bid-Rigging Conspiracy*, *COMPUTER & INTERNET LAWYER*, Jan. 2007, at 30-32 (listing the four companies and sixteen individuals that, as of January 2007, had been indicted in the DRAM conspiracy,

of the cartel, Samsung Electronics, included, at a minimum,⁸⁴ two vice-presidents of marketing for the parent corporation's memory division, a vice-president at Samsung's U.S. subsidiary, a senior manager of DRAM sales, an associate director for DRAM marketing at the U.S. subsidiary, and a sales director for Samsung's German subsidiary.⁸⁵

The first prisoner's dilemma necessitates an intra-cartel mechanism to detect and punish cheating⁸⁶ and thus may generate further demands on the cartel in terms of the number of individuals from each member corporation who are actively involved in the conspiracy. A member corporation, for example, might use a regional sales manager to communicate with a counterpart at a competitor corporation about each member's respective bids at an upcoming reverse auction. Such communications inevitably add to the cartel-related workload of each member corporation, and thus require the knowledge and participation of additional individuals at each of those corporations.

While both the inherent coordination demands of a price-fixing conspiracy and the cheating-related demands brought about by the first prisoner's dilemma weigh in favor of involving more individuals from each member corporation, the second prisoner's dilemma pulls squarely towards the opposite result. The second prisoner's dilemma—whether or not to defect—generates a need for extreme secrecy. In the cartel members' ideal world, only one individual at each member corporation would be knowledgeable about the conspiracy.

Each member of a cartel thus faces an intra-corporate dilemma:⁸⁷ How many individuals within the corporation should be actively involved in or otherwise informed about the conspiracy? As more individuals within a member corporation are knowledgeable about the cartel, the level of secrecy necessarily drops. Consequently, the risk of

including twelve individuals that pleaded guilty to antitrust violations); Flynn, *Samsung*, *supra* note 2, at C-3.

84. The positions listed here are those of the individuals that pleaded guilty to participating in the DRAM cartel. This does not necessarily indicate, however, that these were the only individuals at Samsung who were actively involved in the conspiracy. Indeed, when a corporation pleads guilty to price-fixing charges—as did Samsung—the Department of Justice often provides immunity from individual criminal prosecution to the vast majority of the company's officers and employees in exchange for their individual cooperation with the ongoing investigation. See Spratling, *supra* note 72, at 809–12.

85. See *Three Executives Indicted*, *supra* note 83, at 30-32 (listing the four companies and sixteen individuals that, as of January 2007, had been indicted in the DRAM conspiracy, including twelve individuals that had pleaded guilty); Flynn, *Samsung*, *supra* note 2, at C-3; *Internet: Time Warner Unloads*, WASH. POST, Sept. 22, 2006, at D-4.

86. See *supra* Part II.B.3.a.

87. This third, intra-corporate dilemma is more a byproduct of the first two prisoner's dilemmas than a prisoner's dilemma in its own right.

being detected by law enforcement agencies increases. This third, intra-corporate dilemma is, in a sense, a sort of individualized manifestation of the second prisoner's dilemma. Any individual at a member corporation who is involved in or has knowledge of the cartel's activity has the potential to defect to the government. An individual may do so for much the same reason as a member corporation—for example, out of fear that someone at another member corporation will defect first.⁸⁸

As with the first and second prisoner's dilemmas, this third, intra-corporate dilemma may be solved with trust. For example, within a given product market, such as DRAM, some threshold level of trust between competitors would allow for the formation of a cartel in which only one individual (for example, the vice-president of marketing) at each member company actively participates.⁸⁹ But the ongoing cartelization of that market might, due to logistical complexities of the sort suggested above, require that *six* or more individuals at each of the member companies are actively involved.⁹⁰ The third dilemma thus further raises the threshold level of trust required between competitors.⁹¹

Institutionalized trust can help solve these problems. Institutionalized trust differs from the commonly understood notion of trust in that institutions—or, in the context of this article, *corporations*—rather than individuals are the primary actors in the trust relationship.

88. See Spratling, *supra* note 72, at 805–06 (“Each individual acting on behalf of a company engaged in cartel conduct must ask himself or herself: can I trust my coconspirators to be loyal, to look out for my company's well being and my personal freedom, by not disclosing our cartel activities?”). An individual might also be motivated to defect by a crisis of conscience, or as a bargaining chip (in exchange for immunity or reduced charges) with respect to a separate criminal prosecution by the Justice Department.

89. See *supra* notes 57–60 and accompanying text.

90. Six active participants at each member company would mean that six times as many individuals from each cartel-member company are communicating with individuals at other cartel-member companies (for example, to coordinate prices, volume, bidding, etc.). Consequently, the individuals at each cartel-member company would have to trust six people (rather than one individual) at each of the other cartel-member companies if the cartel is to withstand the prisoner's dilemmas.

91. To complicate matters further, collateral factors may compound the risks associated with the third, intra-corporate dilemma and further raise the trust threshold. There may be turnover within the particular executive and managerial positions that actively participate in the cartel. For example, each successive vice-president of sales for DRAM will have to be “introduced” to the cartel and educated on its workings, which requires additional levels of trust. Such turnover thus may add to the total pool of people who have knowledge of the cartel, thereby threatening secrecy and raising the required trust threshold yet higher. With each additional individual who is introduced into the cartel on behalf of a member corporation, an additional trust relationship is required: in order for the cartel to function, the individuals at the other member corporations with whom the new individual regularly communicates must develop some threshold level of trust for that individual.

Institutionalized trust is closely related to the concepts of “institutional knowledge” and “institutional memory,” the knowledge and memory embedded within an institution, persisting over time, even as the individuals within the institution turnover.⁹² Economists have argued that institutional memory may lead new managers to repeat the actions and policies of their predecessors, even if they are unaware of the rationale for those actions.⁹³ Indeed, this effect is so powerful that the new managers may continue the actions and policies of their predecessors for an even longer period of time than the “old managers with full memory would have continued.”⁹⁴ Institutionalized trust could similarly allow new managers at a corporation to adopt the inter-corporate trust relationships of their predecessors—even if the new managers are ignorant of the decision-making process or rationale that led to the establishment of that trust.

Institutionalizing trust among competitors makes it easier for individuals acting on behalf of large companies to internalize the economic interests shared by competitors. Institutionalized trust could thus motivate competitors to act “rationally” in a way that provides the maximum long-term benefit to all parties—for example, by increasing prices or limiting supply in a given market. As discussed below, the trust-facilitating devices entailed by certain joint ventures may effectively establish institutionalized trust among competitors.⁹⁵ By providing some or all of the trust necessary to solve the prisoner’s dilemmas, institutionalized trust could encourage or enable the creation of, or reinforce already existing, cartels.

4. Institutionalized Trust Also Encourages and Enables Tacit Collusion

A high level of institutionalized trust among competitors is just as essential to tacit collusion as it is to cartels. For much the same reasons that trust among competitors can encourage, enable, and reinforce existing cartels by counteracting the prisoner’s dilemmas, institutionalized trust can also encourage, enable, and reinforce *tacit* collusion, which may violate antitrust laws even in the absence of an explicit cartel agreement.⁹⁶

92. See generally David A. Hirshleifer & Ivo Welch, *Institutional Memory, Inertia, and Impulsiveness* (1999), available at <http://papers.ssrn.com>.

93. See *id.* (suggesting that new managers are aware of their firm’s previous actions but not the rationale for these actions).

94. See *id.*

95. See *infra* Part II.B.4 and *infra* note 97.

96. See, e.g., *infra* text accompanying note 194.

Even if certain executives and managers within a corporation are not involved in a cartel, institutionalized trust may still motivate those individuals to act more consistently with the collective interest of the joint venture's parents, rather than simply in the short-term interests of their own corporation.⁹⁷ The institutionalized trust stemming from a joint venture thus may motivate anticompetitive conduct by individuals who are not knowing participants in a formal cartel—either by encouraging, enabling and reinforcing tacit collusion, or by passively motivating those who are unaware of the existing cartel to act in the shared interests of the joint venture partners.

C. *Trust-Facilitating Devices and Related Factors that Pose Anticompetitive Risks*

This section highlights the features of certain joint ventures among competitors that may be particularly effective in generating institutionalized trust. First, a joint venture may entail an up-front investment of significant size by each of the nominal competitors. Second, a joint venture may create an indirect interlocking directorate among the competitors. Third, a joint venture may generate ongoing risk of

97. For example, a vice president of sales for commodity X at Alpha Inc. may choose not to compete aggressively with Beta Corp. in the X market if he knows that Alpha Inc. and Beta Corp. have a joint venture for the production of commodity Y.

This consequence of institutionalized trust—tacitly anticompetitive conduct by executives and managers—could also reinforce the effectiveness of an existing cartel of which those executives and managers are not explicitly aware. Imagine, for example, that Alpha Inc. and Beta Corp. are the only two producers in the X market, and that these two corporations decide to form a cartel in the X market. Assume that the need for extreme secrecy (a consequence of the second prisoner's dilemma) leads Alpha and Beta to decide that only two individuals within each member corporation, the president and the vice president of marketing, will be knowledgeable about the cartel. Assume further that, as planned at a cartel meeting attended only by the four individual cartel participants (two from each company), Alpha raises its prices across the boards on commodity X. Now assume that reporting directly to the vice president of sales at Beta are five regional sales managers who are not aware of the cartel but are rationally motivated to win customers and gain business.

Upon hearing about Alpha's price increase, these regional sales managers at Beta would naturally want to seize the opportunity to steal Alpha's customers. Indeed, it might be difficult for the vice president of sales at Beta to convey to the sales managers that they may not steal Alpha's customers. The vice president might argue that increased prices are good for everyone, or that stealing customers is not worth the risk of a price war. But it might be particularly difficult for Beta's vice president of sales to effectively communicate the essential message—"hands off of Alpha's customers"—without implicitly disclosing the existence of the cartel in the X market.

Now consider, on the other hand, how this situation might be different if Alpha and Beta had a joint venture for the production of commodity Y. It would be considerably simpler for the vice president at Beta to explain to his sales managers that they are not to steal customers from Alpha because Alpha is an ally in another product market. Indeed, if the institutionalized trust associated with the Alpha-Beta joint venture were well-developed and widely-recognized among Beta's managers, then the vice president might not have to convey the message at all; it might be implicitly understood.

substantial magnitude that is shared among the competitors. Each of these factors may have the effect of increasing trust, minimizing the complications posed by the two prisoner's dilemmas and the intra-corporate dilemma, and therefore minimizing the costs and risks associated with collusion. Each of these three trust-facilitating devices is discussed below.

1. Significant Mutual Investment in the Joint Venture

The most fundamental trust-facilitating device that a joint venture may entail is a significant, up-front investment by each of the joint venture partners. Depending on the structure and operational plans of the joint venture, these funds may be difficult or impossible to recover in the event of failure or premature termination by the venture's parents. In addition to sharing an ongoing interest in the venture's financial success, this sunk cost provides each parent with some degree of control over its competitors' assets.

Significant mutual investment in a joint venture can facilitate trust in at least two ways. First, the reciprocal exchange of control over assets may serve as an affirmative manifestation of trust. Indeed, making a substantial joint investment means the parents of the venture are literally realizing the definition of trust: "the voluntary ceding of control over something valuable to another person or entity, based upon one's faith in the ability and willingness of that person or entity to care for the valuable thing."⁹⁸ Second, a significant mutual investment may constitute a looming punitive mechanism, much like posting a bond, which could be invoked at will by either of the venture's parents.⁹⁹ If one of the partners were to breach the trust of the other, the latter could deliberately mismanage the joint venture to the detriment of the former.¹⁰⁰ Indeed, the latter partner may do so even if the breach occurred in the context of competition outside the scope of the joint venture.¹⁰¹

Imagine, for example, that Alpha Inc. and Beta Corp. compete in the market for product X and the two companies are equal partners in Alphabet Co., a joint venture to produce product Y, the market for which is distinct from that of product X. Assume that Alpha raised prices on product X pursuant to a cartel agreement with Beta. If Beta

98. Cross, *supra* note 40, at 1461; *see also supra* note 40 and accompanying text.

99. *See, e.g.,* Ayres, *supra* note 8, at 298, 310-12 (suggesting that "joint ventures and product exchanges could serve as hostages that commit firms to more effective punishment even before a breach occurs").

100. *See id.* at 298, 311.

101. *See id.*

were then to use the opportunity to steal Alpha's customers in the X market, Alpha could retaliate by using Alphabeta to punish Beta. For example, Alpha might use its fifty percent control to deliberately mismanage Alphabeta—perhaps by pushing the joint venture to sell finished products to Alpha Inc. at a below-margin price or, similarly, to buy raw materials from Alpha Inc. at an inflated price. Of course, in theory, Beta could remedy either course of retaliation through legal action against Alpha for breach of fiduciary trust or a similar claim.¹⁰² Given the enormous costs that would result if law enforcement authorities, plaintiffs' attorneys, or customers became aware of the cartel, however, Beta would be unlikely to risk a court battle and the extensive discovery that would undoubtedly entail.

In any case, the particular manner in which either of the parent companies might use the joint venture to punish the other for cheating on the price-fixing agreement is an issue that they will, in all likelihood, never have to face. Indeed, their mutual investment in the joint venture is so effective in enabling and reinforcing the cartel because it makes the prospect of a falling out between the two companies so intractable. In essence, the substantial mutual investment makes the *potential* cost of a breakdown so high that cheating would be reckless and unwise.¹⁰³

Analyzing whether mutual investment constitutes a trust-facilitating device requires comparing the size of the investment to the size of each company's interest in the market in which the joint venture part-

102. *See id.* at 311. Professor Ayres suggests that:

When the joint venture is run as a corporation separate from the co-investors, state corporate law protects the co-investors from actions that profit one at the expense of others. Actions that generally reduce the value of the joint venture, however, will be largely immunized by this business judgment rule.

Id. at 311 n.76 (citations omitted).

103. One might argue that the potential cost of a breakdown in the relationship of the co-conspirators would be so high for *all* of the joint venture's parents—including both the cheater who is the target of the punishment and the non-cheaters who are effecting the punishment—that using the joint venture as a punitive mechanism against cheating would not be a credible threat. This argument, however, overlooks the fact that the mutual joint venture can be used as a mechanism to effect cartel-related punishments of *varying* degrees. Unlike, for example, nuclear warfare, which is generally not seen as a credible threat against non-nuclear military engagements (e.g., the potential for nuclear attack by the United States against the Soviet Union would not have been a credible threat against a Soviet ground invasion of Vietnam), the mere use of the mutual joint venture to punish a co-conspirator who is cheating on the cartel agreement can be done on a small scale (as a warning shot) or on a large scale. That is, the mutual joint venture may establish a *potential* for inflicting severe punishment, but this punishment could be doled out in whole or in part. The mutual economic exposure created by a joint venture among competitors thus remains a credible threat because inflicting punishment through the joint venture, unlike the mutually assured destruction entailed by nuclear war, is not an all or nothing proposition.

ners are competitors. For example, if a company's investment in the joint venture is equal to or greater than fifty percent of that company's gross annual sales in the market in which the parents compete, that investment would certainly be significant with respect to the competitive market. In such a case, a complete loss of its investment in the joint venture would cost the company as much as half a year of sales revenue in the market in which it competes with its joint venture partner—an amount which, depending on the company's operating margins, might well be equal to a year or more of its operating profits from that market. Indeed, a percentage ratio as small as ten percent might still be considered significant if operating margins in the competitive market are particularly low.¹⁰⁴ This analysis essentially considers the size of each parent's investment (including the initial investment and ongoing or future commitments to invest) in the joint venture relative to the gross annual revenue of that parent's business in the market in which it competes with another parent. The greater the parents' investments in the joint venture relative to their respective interests in the competitive market, the greater the anticompetitive risks.

Take, for example, Gustafson, Inc., a joint venture formed in 1998 between Crompton & Knowles Corp. and Bayer Corp. Bayer invested at least \$140 million into the joint venture, which produces seed treatment products.¹⁰⁵ Within the same time frame, Crompton, Bayer, and a third company, Flexsys, were the three dominant producers of an entirely separate group of products known as rubber chemicals.¹⁰⁶ In the global market for rubber chemicals, which had annual sales totaling more than half a billion dollars,¹⁰⁷ Crompton and Bayer each had up to a twenty percent market share, while Flexsys had thirty

104. At first glance, either a company's operating profit or, similarly, its net profit from the competitive market might seem to be a better comparator than gross sales revenue. Such profit indicators, however, can vary dramatically from year to year, or even quarter to quarter, and are thus too volatile to provide a meaningful metric when compared to the mutual investment. Gross sales revenue, on the other hand, is often relatively stable over time for a given company, particularly among the larger players in global commodity markets of the sort that are most susceptible to cartelization. *See supra* note 81.

105. Joseph Chang, *Bayer Increases US Investments to \$ 15 Billion*, CHEM. MKT. REP., Apr. 5, 1999, at 1. Bayer Corp. is the U.S. subsidiary of Bayer AG, a Germany company.

106. *See* Commission Decision: Rubber Chemicals (EC) Case No. COMP/F/C.38.443, 2006 O.J. (L353/50) § 2, available at http://eur-lex.europa.eu/LexUriServ/site/en/oj/2006/l_353/l_353_20061213en00500053.pdf.

107. *See* Robert Westervelt, *2002 Forecast: What's On the Radar Screen*, CHEM. WEEK, Jan. 2, 2002, at 20 (showing that global sales of rubber chemicals in 2001 totaled \$680 million, with an annual growth forecast of 2% per year, which suggests that annual sales in 1998 were roughly between \$500 million and \$680 million).

percent.¹⁰⁸ Thus, Crompton and Bayer each had annual sales of roughly \$100 million in the rubber chemicals market. Analyzing either Crompton or Bayer's mutual investment in the Gustafson joint venture as a potential trust-facilitating device with respect to competition in the rubber chemicals market would therefore proceed as follows:

$$\frac{\$140 \text{ million (investment in the joint venture)}}{\$100 \text{ million (gross annual sales in the competitive market)}} = 140\%$$

Each company's investment in the joint venture thus represented 140% of its annual sales in the market in which the companies competed—a highly significant mutual investment.

In order to determine whether this investment posed an anticompetitive risk, it is necessary to consider the concentration of the affected market. As discussed below, the risk of anticompetitive effects within a given market is only relevant if the Herfindahl-Hirschman Index ("HHI"s) indicates that the concentration level of the relevant market is high.¹⁰⁹ The market for rubber chemicals has an HHI of over 1800,¹¹⁰ and would thus be considered a "highly concentrated" industry.¹¹¹ Such a significant mutual investment among competitors in a highly concentrated industry poses a substantial trust-facilitating risk and, therefore, a serious threat to competition. As explained below,¹¹² this risk must be weighed against any procompetitive benefits to determine whether the joint venture should be condemned under the antitrust laws. Nonetheless, the Gustafson joint venture between Crompton and Bayer created a potent trust-facilitating device and thus should be presumed unlawful under the framework for antitrust analysis of joint ventures proposed by this Article.¹¹³

108. See Rubber Chemicals, *supra* note 106.

109. See *infra* Part IV.A.1.b.

110. See Rubber Chemicals, *supra* note 106. The European Commission's decision in the Rubber Chemicals case estimates each company's share of the global market for rubber chemicals as up to 30% for Flexsys, up to 20% for Crompton & Knowles, up to 20% for Bayer, and up to 10% for General Química, a fourth competitor. Considering only these four producers—which make up 80% of the total market—the HHI would be calculated as follows: $(30)^2 + (20)^2 + (20)^2 + (10)^2 = 1800$. The rubber chemicals market thus has an HHI of at least 1800, before even considering the increase in the HHI that would inevitably be contributed by the remaining 20% of the producers in the market, which are not accounted for in this calculation.

111. See U.S. DEP'T OF JUSTICE & FED. TRADE COMM'N, HORIZONTAL MERGER GUIDELINES § 1.5 (1997) [hereinafter FTC-DOJ, MERGER GUIDELINES], available at http://www.usdoj.gov/atr/public/guidelines/horiz_book/hmg1.html.

112. See *infra* text accompanying notes 188–189.

113. For additional discussion of the Gustafson joint venture between Crompton & Knowles and Bayer, see *infra* text accompanying notes 266–272.

2. Creation of an Indirect Interlocking Directorate

If a joint venture establishes a management team composed of executives from each of its parents, it may create another trust-facilitating device. In such a case, the joint venture creates an indirect, as opposed to direct, interlock,¹¹⁴ and thus does not run afoul of the *per se* prohibition against direct interlocking directorates among competitors set out in Section 8 of the Clayton Act.¹¹⁵ Nonetheless, the indirect interlock created by a joint venture among competitors raises many of the same problems that Congress intended to remedy when, at President Wilson's request, it passed the Clayton Act. Wilson urged Congress to enact "laws which will effectually prohibit and prevent such interlockings of the *personnel* of the directorates of the great corporations . . . as in effect result in making . . . those who affect to compete in fact partners and masters of some whole field of business."¹¹⁶

Previous commentators have noted that a *direct* interlocking directorate may create trust between competitors through at least two mechanisms. First, the financial interdependence of the interlocking companies reduces "the risk of one partner selling out the other because each partner has a stake in the other's financial success."¹¹⁷ Second, placing directors from competing companies in the same boardroom results in increased transparency.¹¹⁸ Both of these consequences are equally plausible in the context of an *indirect* interlocking directorate.

An interlocking directorate may likewise promote cooperative, trusting relationships between representatives of each competitor. As evidenced by the prisoner's dilemma research discussed above,¹¹⁹ "perhaps the best indicator of whether a player will cooperate in the future is whether she cooperated before."¹²⁰ An interlocking directorate may bring together competitors' high-ranking executives to work

114. Whereas a direct interlock occurs when a director serves concurrently on the boards of two competing corporations, an indirect interlock occurs "where each of two corporations has a director on the board of a third corporation." STAFF OF H. COMM. ON THE JUDICIARY, 89TH CONG., REPORT ON INTERLOCKS IN CORPORATE MANAGEMENT, at 26 (1965) [hereinafter H. COMM., REPORT ON INTERLOCKS].

115. 15 U.S.C. § 19 (2000).

116. H. COMM., REPORT ON INTERLOCKS, *supra* note 114, at 16.

117. Leslie, *Trust*, *supra* note 64, at 583.

118. *Id.* (suggesting that an interlocking directorate effectively "place[s] a director on a cartel partner's board" so that "each cartel member has an observer in place who can monitor activities such as plans to reduce price, expand capacity, or introduce new products that could undermine the cartel agreement").

119. See *supra* notes 63–65 and accompanying text.

120. Leslie, *Trust*, *supra* note 64, at 542.

as close associates towards a common goal.¹²¹ Indeed, serving together on the same board of directors allows executives from competing companies to formally convene on a regular basis and make decisions in an official capacity in pursuit of a common end—the increased profitability of the joint venture. These are nearly the same activities in which representatives of cartel members engage, though cartel participants must do so informally, unofficially, and in secrecy.

An indirect interlocking directorate thus provides an ideal and—unless the joint venture is condemned by antitrust enforcers—potentially *legal* training ground for cartel participants. The practice environment provided by the joint venture's boardroom is a real-life trial run involving a corporation's profitability, the results of which will likely impact both the personal compensation and the career trajectory of the individuals who serve on the joint venture's board. These individuals have a strong and natural motivation to cultivate trust among themselves, irrespective of any competitive markets in which the joint venture's parents may compete.

Analysis of an interlocking directorate as a potential trust-facilitating device requires a close look at the structure of the joint venture's board. First, it is important to consider which entities or individuals have an ownership interest in the joint venture and in what proportion. Do the competitors own equal shares of the joint venture, as in the Gustafson example discussed above,¹²² in which Crompton and Bayer each owned half of the joint venture?¹²³ Are there other entities or individuals who also have ownership stakes in the joint venture? If no investors other than the competitors have a significant stake in the joint venture, the interlocking directorate may serve as an even more effective training ground and thus a more powerful trust-facilitating device.

Second, it is important to consider how the board of directors and managers of the joint venture are chosen. Does each parent have the power to appoint half of the venture's directors? The more balanced the management of the joint venture, the more likely it is to effectively facilitate trust. Whether any of the joint venture's directors or

121. One might argue that, from an antitrust perspective, this situation is no more inherently risky than, say, allowing the same competitors' executives to play together on a competitive softball team. But that argument overlooks the essential *dissimilarity* between a recreational activity such as playing for the same softball team versus participating together in a price-fixing cartel. The argument also fails to recognize the key *similarities* between serving on the same board of directors and participating together in a price-fixing cartel.

122. See *supra* notes 105–113 and accompanying text.

123. See Patricia Van Arnum, *Bayer and Cyanamid Add to Growing List of Crop-Protection Deals*, CHEM. MKT. REPORTER, NOV. 2, 1998.

managers also serve simultaneously in management roles at the parent companies is also important. For example, one of the joint venture's parents might appoint its president to serve concurrently as a director of the joint venture, which further increases the likelihood of facilitating trust between the parent-competitors.

Finally, it may also be worthwhile to consider the standard length of a joint venture director's appointment, as well as the basis on which a director may be removed from the board. An interlocking directorate may pose less of a trust-facilitating risk if, for example, a director can be removed only by the unanimous vote of both of the joint venture's parent companies (as opposed to the whim of the particular parent company who appointed that director). This is particularly true if the board is composed of individuals who do not simultaneously hold management positions at the parent company and thus are potentially able to exercise some degree of independent judgment.

3. Sharing Substantial, Ongoing Risk and Employing "Strategic Ambiguity"

A joint venture among competitors may entail a third trust-facilitating device if it establishes a substantial and shared ongoing risk among its parents. Under current frameworks for antitrust analysis of joint ventures, risk-sharing with one's competitors is often seen as a procompetitive virtue.¹²⁴ It is also a particularly effective device, however, for building trust among competitors. Where present, this device is likely intertwined with significant mutual investment and interlocking directorates, though it may facilitate trust even further.

Although difficult to quantify, a substantial, ongoing risk is created by, for example, "the uncertain costs and benefits" that a research and development joint venture entails.¹²⁵ In such an undertaking, future funding requirements may be imprecisely defined in the joint venture agreement or subject to future negotiation by the joint venture's parents. Or, the venture may have only a slim chance of developing a viable product or process that will generate future returns.

Sharing of substantial, ongoing risk is more likely where the mission and operations of the joint venture are not strictly articulated at the

124. See *infra* Part IV.A.4. More specifically, however, risk-sharing in itself is not virtuous; rather, it is risk-sharing that allows two firms to "form a joint subsidiary to undertake an activity too risky for either parent alone" that provides procompetitive benefits. 3 PHILLIP E. AREEDA & HERBERT HOVENKAMP, *ANTITRUST LAW: AN ANALYSIS OF ANTITRUST PRINCIPLES AND THEIR APPLICATION* ¶ 703c, at 157 (2d ed. 2002) [hereinafter 3 AREEDA & HOVENKAMP, *ANTITRUST LAW*].

125. See Ivan K. Fong & John K. Walker, *International High-Technology Joint Ventures: An Antitrust and Antidumping Analysis*, 7 INT'L TAX & BUS. LAW. 57, 63 (1989).

time of the joint venture's formation. Again, a research and development joint venture might entail this sort of risk because when the venture is created it may not have a well-defined end product, which makes it difficult to structure the venture's goals, activities, and operations.¹²⁶

Professor Geis has suggested that parties may intentionally "employ strategic ambiguity" in the terms of a major deal in order to "cultivate a cordial working relationship."¹²⁷ He uses the example of a merger to illustrate his idea,¹²⁸ but the proposition may be even more relevant to a joint venture agreement.

Geis suggests that strategic ambiguity may be used to "increase joint surplus."¹²⁹ To support this proposition, he first cites *Co-opetition*,¹³⁰ a business-press book which is discussed at length below, for its discussion of "strategies to 'stir up the fog' in business transactions."¹³¹ Geis thus recognizes that strategic ambiguity is promoted in the mainstream as a viable business strategy. He also cites two separate economic papers for the more substantive proposition that "purposefully indefinite contracts . . . might increase joint surplus."¹³² The fact that strategic ambiguity is both a recognized business strategy *and* a potentially viable mechanism for increasing joint surplus confirms the anticompetitive threat it poses as a trust-facilitating device.

A joint venture agreement that employs strategic ambiguity is likely to entail substantial, ongoing risk shared by the joint venture's parents, and thus to threaten competition. One sort of strategic ambiguity in a joint venture agreement among competitors is a lack of explicit termination provisions. The absence of a well-defined exit plan—in case any or all of the joint venture's parents wanted out of the venture—substantially raises the level of ongoing risk shared by the competitors.

126. Cf. Anthony L. Clapes, *Blinded by the Light: Antitrust Analysis of Computer Industry Alliances*, 61 ANTITRUST L.J. 899, 904–05 (1993) (discussing the related difficulty of conducting a market analysis of a research joint venture amidst uncertainty about what product, if any, the research joint venture will ultimately produce).

127. See George S. Geis, *An Embedded Theory of Indefinite Contracts*, 90 MINN. L. REV. 1664, 1680–82 (2006).

128. See *id.*

129. See *id.*

130. See *infra* Part III.

131. See Geis, *supra* note 127, at 1681 n.86 (quoting BRANDENBURGER & NALEBUFF, CO-OPECTION, *supra* note 10, at 222–28).

132. See *id.* (citing B. Douglas Bernheim & Michael D. Whinston, *Incomplete Contracts and Strategic Ambiguity*, 88 AM. ECON. REV. 902, 902–04 (1998); Birger Wernerfelt, *Incomplete Contracts and Renegotiation*, MIT SLOAN WORKING PAPER NO. 4506-04 (2004), available at <http://papers.ssrn.com>).

Determining whether a joint venture employs strategic ambiguity or creates substantial, ongoing, shared risk is more difficult and less precise than analyzing the first two trust-facilitating devices. After all, every business, and thus every joint venture, involves some degree of risk. Thus it may be worthwhile to briefly contrast two hypothetical joint ventures among competitors, the first of which entails substantial, ongoing risk shared by the competitors and the second of which does not.

The joint venture agreement for JV-A, a research and development joint venture between two computer chip manufacturers, has opened terms and vaguely-worded termination provisions, requires substantial up-front and ongoing investments, and has the potential for substantial long-term losses or profits. The joint venture agreement for JV-B, a grain-trading business-to-business marketplace joint venture among five grain producers, prescribes strict rules regarding the rights and privileges of each joint venture partner, including explicitly defined termination provisions, requires only modest investment by each partner, and has the potential for only limited losses or profits.

JV-A creates a substantial, ongoing risk shared among the competitors because: (1) the organizational and operational parameters of the venture employ strategic ambiguity, requiring the parents to retain substantial discretion in its ongoing operation; (2) the agreement does not provide a clean exit plan for either of the parents in the event of changed circumstances, such as a breakdown in the parents' relationship; and (3) the profitability of the venture is so uncertain and the potential costs so great. JV-B, on the other hand, does not create a substantial, ongoing risk because: (1) the agreement strictly limits the extent to which any of the venture's parents can unilaterally meddle in its operations; (2) the agreement provides a clearly-defined exit plan in the event that one of the parents decides to end its affiliation with the joint venture; and (3) the maximum potential profits or losses to any individual parent are insubstantial.

As these illustrations demonstrate, analyzing whether a joint venture creates a substantial, ongoing, shared risk depends on a number of factors. In some cases the various considerations may weigh in opposite directions so that the analysis is indeterminate, but many ventures will clearly fall closer to one end of the spectrum than the other. A joint venture that entails shared, ongoing risk as substantial as that of JV-A would no doubt exceed the threshold level necessary to constitute a trust-facilitating device.

D. *Aggregate Trust-Facilitating Effects Arising from Webs of Joint Ventures Among Competitors Within an Industry*

Multiple joint ventures among competitors in a given industry may pose even greater anticompetitive risks, forming a web of trust-facilitating devices among the competitors. Economists have suggested that competitors may “exchange hostages (for example, by posting bonds or creating sunk costs) to keep each other from breaching their agreement.”¹³³ Professor Williamson, for example, developed the notion of “credible commitments,” which involve “reciprocal acts designed to safeguard a relationship.”¹³⁴ Williamson focused much of his analysis on webs of product exchange agreements that existed in the mid-1970s among petroleum producers in the United States and Canada.¹³⁵ In any single agreement, one petroleum producer would agree to a reciprocal supply agreement with another. Williamson suggested that these exchange agreements created “a web of interdependencies among these firms, thereby helping to effect an oligopolistic outcome in an industry that was relatively unconcentrated on normal market structure criteria.”¹³⁶

The mutual investment involved in a joint venture among competitors¹³⁷ could constitute a credible commitment much like the product exchanges in the petroleum industry. For example, two competitors’ common investment in a small joint venture—a relatively insignificant anticompetitive risk standing alone—may be compounded if other competitors within the same market have similar joint ventures with each other. In other words, an array of trust-facilitating devices created by a web of minor joint ventures within a single industry may have a cumulative anticompetitive effect of substantial magnitude. Similarly, a web of joint ventures among competitors, each of which creates one or more trust-facilitating devices, could pose a substantial anticompetitive risk even if the affected market appears to be relatively unconcentrated based on standard market structure criteria.

133. See Ayres, *supra* note 8, at 298, 310 (citing OLIVER E. WILLIAMSON, *THE ECONOMIC INSTITUTIONS OF CAPITALISM* 163–206 (1985); Oliver E. Williamson, *Credible Commitments: Using Hostages to Support Exchange*, 73 *AM. ECON. REV.* 519 (1983)).

134. Williamson, *Credible Commitments*, *supra* note 133, at 519.

135. *Id.* at 533–37.

136. *Id.* at 533.

137. See *supra* Part II.C.1 (discussing how a significant mutual investment in a joint venture among competitors may facilitate trust among the joint venture’s parents).

III. CORPORATE AMERICA'S EMBRACE OF THE PRINCIPLES BEHIND TRUST-FACILITATING DEVICES: *CO-OPETITION* AND THE EMERGENCE OF GAME THEORY CONCEPTS AS BUSINESS-SCHOOL FUNDAMENTALS

Over the past ten years, a recent trend among business-school academics and the business press has been the introduction of game theory concepts into modern corporate strategy. This part highlights the anticompetitive principles underpinning much of the infusion of game theory strategy into the corporate world. In particular, this section considers the anticompetitive teachings of the book *Co-opetition*, the title of which comes from an amalgamation of the words "cooperation" and "competition."¹³⁸ Although joint ventures are not its focus, the book promotes anticompetitive principles and counsels executives to embrace exactly the sort of trust-facilitating devices highlighted by this Article. *Co-opetition* and the corporate strategy trend it represents are thus likely to motivate corporate executives to use joint ventures as devices to create and maintain tactical interdependence between competitors.

A. *The Increasing Significance and Influence of "Co-opetition" and Related Game Theory Concepts Among Corporate Executives*

Co-opetition, co-authored by Adam Brandenburger, a professor at Harvard Business School, and Barry J. Nalebuff, a professor at the Yale School of Management, popularized the concept of "competing and cooperating at the same time."¹³⁹ *Co-opetition* enjoyed success as a business-press best-seller¹⁴⁰ and received public praise from business leaders such as the CEO of Intel, Andrew S. Grove, managing executives at Goldman Sachs and Bear Stearns, the CEO of insurance titan General Re, and a Nobel laureate in economics, Kenneth Arrow.¹⁴¹

138. BRANDENBURGER & NALEBUFF, *CO-OPETITION*, *supra* note 10, at 4–5.

139. *Id.*

140. See, e.g., Hardy Green, *The Business Week Best-Seller List*, *BUS. WEEK*, Aug. 26, 1996, available at <http://www.businessweek.com/1996/35/b349025.htm> (listing *Co-opetition* in twelfth place on the hardcover bestseller list); Hardy Green, *The Business Week Best-Seller List*, *BUS. WEEK*, Sept. 30, 1996, available at <http://www.businessweek.com/1996/40/b349538.htm> (listing *Co-opetition* in tenth place on the hardcover bestseller list, and also noting that the "games" discussed in the book are not mere child's play: "The book's case studies are for real—and lots more useful.").

141. See BRANDENBURGER & NALEBUFF, *CO-OPETITION*, *supra* note 10, at preamble and back cover of dust jacket. William Barnett, a director at premiere management consulting firm McKinsey & Co remarked that, "*Co-opetition* shows you how to benefit from both aspects of business [competition and cooperation]: how to make a bigger pie, as well as get a bigger share of the pie. These practical insights from game theory are helping companies find more profitable business strategies." *Id.* at back cover of dust jacket.

Co-opetition also received substantial attention from the business media and has been widely cited with little, if any, criticism in the published articles of both legal scholars and business-school academics.¹⁴² The game-theory-inspired strategies promoted in *Co-opetition* have thus become part of the modern canon of corporate strategy.¹⁴³

B. *The Anticompetitive Underpinnings of Co-opetition*

Many of the strategies promoted in *Co-opetition* are, at their core, anticompetitive. Among its insights, *Co-opetition* encourages executives to view opponents as potential allies, to avoid price wars at all costs, and to avoid the “hidden costs” of competitive bidding. Throughout *Co-opetition*, the authors extol the virtues of exercising monopoly power and undersupplying product markets. Indeed, one of the book’s central themes is the notion of “finding ways to make the pie bigger rather than fighting with competitors over a fixed pie.”¹⁴⁴ The authors present this as “a different way of thinking about business,” but the idea of enlarging rather than fighting over the pie is as old as the steel and oil trusts that inspired the enactment of antitrust laws more than a century ago.¹⁴⁵ It is a strategy that has long been pursued by oligopolists and price-fixing cartels alike, a mindset that could just as readily be characterized by the words “concentration” or “collusion,” as by the newly minted “co-opetition.”

The authors of *Co-opetition* advocate four particular strategies that are, in essence, anticompetitive. First, readers are encouraged to view competitors not as opponents or enemies, but as potential allies, and to look for opportunities for cooperation with competitors.¹⁴⁶ Two of the most obvious ways to cooperate with competitors are, of course, to cartelize or to form a joint venture. Second, the authors celebrate the benefits of monopoly power and undersupplying a market.¹⁴⁷ In the

142. A search on Westlaw alone returns more than 35 legal journal articles that have cited *Co-opetition*, and Google Scholar shows that at least 121 social science papers and books have cited the book. See Westlaw: Journal & Law Review Database, available at www.westlaw.com (last searched March 1, 2007); Google Scholar: Nalebuff, *Co-opetition*, available at <http://scholar.google.com/scholar?hl=en&lr=&cites=12708396891929440629>.

143. See, e.g., Jeff Peline, *Coopetition Gaining Acceptance*, CNET NEWS.COM, Mar. 23, 1998, <http://news.com.com/2100-1001-209388.html?legacy=cnet>.

144. BRANDENBURGER & NALEBUFF, CO-OPETITION, *supra* note 10, at 14.

145. See *supra* note 37 and accompanying text.

146. See BRANDENBURGER & NALEBUFF, CO-OPETITION, *supra* note 10, at 262.

147. *Id.* at 111–22. In a section entitled “Added Value of a Monopoly,” the authors use the story of videogame-maker Nintendo during the late 1980s and early 1990s as an exemplar of astute corporate strategy. They explain that, “[t]hat’s why Nintendo did so well: *while monopoly by itself is nice, monopoly and shortage is twice as nice*. The Nintendo story demonstrates the *potent effects of undersupplying customers*.” *Id.* at 118 (emphasis added).

context of a joint venture among competitors, the combination of (a) the trust-facilitating devices highlighted by this Article and (b) a mutual appreciation that a market shortage is better than a surplus, poses a serious threat to competition.

Third, the authors implore readers not to be “the spoiler”—especially when market shares and pricing are at an equilibrium—and, above all, to avoid inciting a price war.¹⁴⁸ The underlying lesson here seems to be a subtle endorsement of the philosophy that—to quote from ADM’s unofficial business philosophy prior to a rash of criminal and civil antitrust actions against it in the mid-1990s—“the competitors are our friends.”¹⁴⁹ In a chapter entitled “Friend or Foe,” the authors quote the words of Michael Corleone from the movie *The Godfather, Part II*: “Keep your friends close, but your enemies closer.”¹⁵⁰ In other words, a prudent executive should try to cultivate cooperative relationships among his or her competitors. As discussed above, the trust-facilitating devices created by certain joint ventures are highly-effective mechanisms for developing cooperative relationships among competitors.¹⁵¹

Fourth, an entire section of *Co-opetition* is devoted to what it terms the “Eight Hidden Costs of Bidding”¹⁵²—the “hidden costs associated with making a competitive bid.”¹⁵³ As much as revealing the so-called “hidden costs,” however, this part of the book is an admonition to corporate executives to strictly *avoid* competitive bidding as a way to win new business.¹⁵⁴ Indeed, the authors do not suggest that there are any positive aspects to competitive bidding.

The last of the eight “hidden costs” is perhaps the most pertinent to the trust-facilitating devices created by joint ventures: “Don’t destroy your competitors’ glass houses.”¹⁵⁵ The underlying message here is that “[l]owering your competitor’s profits isn’t necessarily smart.”¹⁵⁶

148. See *id.* at 226–27 (criticizing TWA’s decision to be “the spoiler” by “cut[ting] prices and steal[ing] share” and thus inciting a price war at a time when airline ticket prices were otherwise likely to stabilize due to increased pricing transparency).

149. EICHENWALD, *THE INFORMANT*, *supra* note 1, at 51 (2000). In full, ADM’s unofficial motto was “[t]he competitors are our friends, and the customers are our enemies.” *Id.*

150. BRANDENBURGER & NALEBUFF, *CO-OPETITION*, *supra* note 10, at 36. The authors urge reader’s to understand that “once competitors enter the game, you can have win-win interactions with them,” and that there are “many times when the best strategy is to let competitors succeed as competitors.” *Id.* at 38.

151. See *supra* Parts II.C.1–3.

152. BRANDENBURGER & NALEBUFF, *CO-OPETITION*, *supra* note 10, at 86.

153. *Id.*

154. See *id.* at 86–88.

155. See *id.* at 89.

156. See *id.* at 88.

Rather than the “lose-lose” of a price war, the authors encourage the reader to “think Co-opetition”:

If you lower your rival’s profits, he then has less to lose and every reason to be more aggressive. He can go after your existing accounts with abandon. In contrast, the more money your rival is making, the more he has to lose from getting in a price war. Until your rivals live in glass houses, expect them to throw stones. Thus, it’s in your interest to help them build a glass house¹⁵⁷

Each of the three trust-facilitating devices highlighted by this article provides an ideal building block for the construction a glass house, allowing competitors to establish and maintain mutual vulnerabilities.¹⁵⁸ Thus, by forming a joint venture with one’s competitors, a business not only helps them build a glass house, but it also moves some of its own family members in under the same roof—in effect, sharing the glass house.

C. Co-opetition’s *Unsubtle Disdain for Antitrust Laws and Enforcers*

Throughout the book, the authors of *Co-opetition* evince a disdain for antitrust laws and antitrust enforcement agencies. A long-recognized hallmark of cartel behavior is the establishment of a social norm among the co-conspirators that expresses contempt for antitrust laws.¹⁵⁹ As one commentator notes, “a social norm that belittles antitrust principles can become so pervasive that executives fail to appreciate that antitrust violations are illegal” and believe what they are doing is not wrong.¹⁶⁰ Throughout *Co-opetition*, commentary on the antitrust legal regime is unfailingly negative. The authors suggest that the antitrust laws are not procompetitive but intrusive and burdensome.¹⁶¹ While the authors do not overtly counsel violation of U.S. antitrust laws,¹⁶² their commentary suggests that it may sometimes be

157. BRANDENBURGER & NALEBUFF, CO-OPETITION, *supra* note 10, at 89.

158. See *supra* Parts II.C.1–3.

159. Leslie, *Trust*, *supra* note 64, at 587.

160. *Id.*

161. See BRANDENBURGER & NALEBUFF, CO-OPETITION, *supra* note 10, at 194–95 (suggesting, for example, that the Federal Trade Commission (“FTC”) “appears to operate from a mental model perhaps more relevant to a bygone era of smokestack industries,” and “tends to challenge practices that allow companies to sustain prices above variable cost—so-called facilitating practices”).

162. The authors go so far as to provide a disclaimer that: “[t]o our knowledge, none of the contracts we’ve discussed raise antitrust concerns. But the laws change and interpretations vary, and we recommend that you consult with legal counsel.” *Id.* at 192.

prudent to break the rules and that the benefits of breaking the anti-trust laws may outweigh the penalties.¹⁶³

Co-opetition is structured as a book of lessons and practical advice illustrated by real-world examples. In teaching corporate executives how to exploit the potential for cooperative relationships within the competitive marketplace, the authors often cast videogame-maker Nintendo as a real-world role model. Perhaps no other company figures as prominently in the book, and many of the lessons end with Nintendo as the victor, deservedly triumphant after executing innovative, intelligent, and, above all, rational strategies. In contrast to Nintendo, the authors often cast antitrust enforcement agencies as the arch-villains of their lessons—the sand in the gears of economic progress and prosperity.

As in any satisfying narrative, these antagonists are inevitably trounced—their half-cocked theories proven wrong and their cases dismissed, if not voluntarily withdrawn. Following one of many Nintendo success stories, for example, the authors discuss a Justice Department investigation of Nintendo in the early 1990s.¹⁶⁴ After explaining the allegations against Nintendo, the authors quote extensively from a scathing editorial by the business-weekly *Barron's*, which suggests that:

The legion of trustbusting lawyers would be far more productively occupied playing Super Mario Brothers 3 than bringing cases of this kind. . . . In their pursuit of . . . crooks, we wish the trustbusters well. But [they] are in equally hot pursuit of Nintendo and other real business success stories, real achievements, real technological progress and real rewards.¹⁶⁵

163. For example, the authors discuss a scheme by General Motors (together with Firestone, Mack Trucks, Phillips Petroleum and Standard Oil) in the 1920s and '30s, in which the company bought up local trolley franchises around the country and shut them down, in order to spur the automobile business. *Id.* at 106–07. As the authors note, “[a]lthough effective, the strategy was also highly illegal. It was a clear violation of the Sherman Act.” *Id.* at 107.

The authors further discussion of the trivial legal consequences the companies faced suggests that the companies made the right move, as “[t]he courts fined GM and its coconspirators \$5000 each So a mere slap on the wrist for GM and its fellow conspirators.” *Id.* The authors are quick to follow with another disclaimer, noting that, “[t]oday the U.S. courts take a much more serious view of antitrust violations.” *Id.* Nonetheless, their General Motors vignette ultimately ends with an endorsement of market consolidation and concentration, noting that “there are some circumstances—a declining industry, for example—in which it’s both appropriate and legal to acquire competitors in order to rationalize industry capacity.” *Id.*

164. *Id.* at 115–17.

165. *Id.* at 117 (quoting *Barron's*, Dec. 23, 1991).

“A year later,” the authors add, “the government dropped its investigation.”¹⁶⁶

D. *Encouraging Strategic Non-Verbal Communications Between Competitors*

In much the same way that a joint venture agreement among competitors may employ “strategic ambiguity,”¹⁶⁷ the authors of *Co-opetition* suggest that it may often be wise to “maintain a fog over what could happen” if a relationship with another party were to break down—“not necessarily a thick fog, but definitely some fog.”¹⁶⁸ They advise that, “[i]n business relationships, just as in marital relationships, some thoughts are better left unspoken.”¹⁶⁹ In other words, “[s]ome . . . threats . . . are better left implicit.”¹⁷⁰ The implicit threat is, of course, an essential part of what makes mutual investment and risk-sharing such effective trust-facilitating devices.¹⁷¹ By creating implicit contingencies and interdependencies, a joint venture among competitors can extinguish their incentive and ability to compete.

E. *Recognizing the Links Between Games: Overlaps and Interdependence Among Markets and Players*

Co-opetition urges executives to create, understand, and exploit links between “games” among common players—or, in other words, links between *markets* among common *competitors*. Although the authors do not specifically address joint ventures, they advocate exploitation of the same principles that underlie trust-facilitating devices—the mechanisms by which joint ventures among competitors can so effectively encourage, enable, and reinforce collusion. First, the authors instruct the reader to recognize the links between games: “Start with the [p]layers. Anytime there’s a player in your game who’s also a player in another game, the two games are potentially linked. The player in common could be . . . any of your . . . competitors.”¹⁷² As they explain, “two games become one larger game” if a player “be-

166. *Id.* at 117; see also *id.* at 192–93 (describing another apparently well-deserved loss for antitrust enforcers: the FTC’s failed case against Du Pont and Ethyl Corp, challenging the companies use of most-favored-customer (or “MFC”) clauses).

167. See *supra* notes 127–132 and accompanying text.

168. BRANDENBURGER & NALEBUFF, *CO-OPETITION*, *supra* note 10, at 219.

169. *Id.* at 218.

170. *Id.*

171. See *supra* Part II.C.3 (discussing how strategic ambiguity in a joint venture agreement among competitors may increase the level of ongoing, shared risk, and thus serve as a trust-facilitating device).

172. BRANDENBURGER & NALEBUFF, *CO-OPETITION*, *supra* note 10, at 235.

believes that what will happen in one of them is contingent on what happens in the other.”¹⁷³ Thus, “by creating . . . these perceptions of linkage” one can “change the boundaries of the game.”¹⁷⁴ The authors suggest a variety of ways to “creat[e] a perceptual linkage”: “[t]hreats and promises are the classic examples,” and “setting a precedent is another tactic designed to link games.”¹⁷⁵ In other words, “You take an action in a game today to convince people of what you’ll do next time you’re in a similar game.”¹⁷⁶ Establishing a series of positive precedents is, of course, the key to creating the trust necessary to solve the prisoner’s dilemmas.¹⁷⁷

The authors further explain that “[t]he links can be very tight or very loose: an explicit threat or promise to act in a certain way, or a vague hint of general policy.”¹⁷⁸ In any event, the authors emphasize, “[t]he key ingredient for linkage is *contingency*: another player must believe that what you will do in one game depends on what happens in another. Or you believe that he believes this. Or he believes that you believe this.”¹⁷⁹ By creating contingencies such as mutual investment and risk-sharing, a joint venture among competitors can create just the sort of links the *Co-opetition* authors suggest. Such linkage creates a strong incentive for those competitors to cooperate in the markets in which they compete.

The authors’ advice on linking games is part of a broader message about looking beyond the immediate “game” (i.e., market) and recognizing that “every game takes place in a larger context.”¹⁸⁰ This larger context “is what allows a game’s boundaries to be expanded or simply moved.”¹⁸¹ In other words, “You may think you know what game you’re playing, but that game is invariably part of a larger one. That’s a good message to end with. *There’s always a LARGER game.*”¹⁸² *Co-opetition* thus urges corporate executives to create and exploit links between markets and foster interdependence among market players. The trust-facilitating devices created by a joint venture allow competitors to appreciate the so-called “larger game,” even if the venture’s market is entirely distinct from that in which the competitors compete.

173. *Id.*

174. *Id.*

175. *Id.*

176. *Id.*

177. See *supra* note 63 and accompanying text.

178. BRANDENBURGER & NALEBUFF, *CO-OPETITION*, *supra* note 10, at 254.

179. *Id.* (emphasis in original).

180. *Id.* at 260.

181. *Id.*

182. *Id.* (emphasis in original).

IV. MODERN ANTITRUST DOCTRINE REGARDING JOINT VENTURES

The anticompetitive, trust-facilitating possibilities of joint ventures are not recognized under current antitrust analysis. This part discusses the legal standards and the existing framework under which joint ventures are analyzed, including the *Collaboration Guidelines* jointly authored by the Federal Trade Commission (“FTC”) and the Justice Department. While current joint venture doctrine, generally, and the *Guidelines*, specifically, encourage analysis of factors that are closely related to the trust-facilitating devices highlighted in this Article, they ultimately fall short of recognizing any of the three devices.

A. *Modern Antitrust Analysis of Joint Ventures Fails to Recognize the Risks of Trust-Facilitating Devices*

This section considers how and why current antitrust doctrine regarding the analysis of joint ventures fails to recognize the trust-facilitating devices highlighted by this article.

1. Overview of Modern Antitrust Doctrine Regarding Joint Ventures

a) Legal Standards Under the Sherman Act § 1 vs. the Clayton Act § 7

Although existing case law and frameworks for antitrust analysis of joint ventures do not currently recognize the risks posed by trust-facilitating devices, the broad language of the core antitrust statutes effectively encompasses these risks. As a technical matter, it may be difficult to determine whether a joint venture should be analyzed as a “combination” under Section 1 of the Sherman Act¹⁸³ or as a sort of merger or “acquisition” under Section 7 of the Clayton Act.¹⁸⁴ This distinction, however, is inconsequential because the same substantive standards are applied under both statutes.¹⁸⁵

183. 15 U.S.C. § 1 (2006) (“Every . . . combination . . . in restraint of trade . . . is hereby declared to be illegal.”).

184. 15 U.S.C. § 18 (2006) (“No person . . . shall acquire . . . any part of the stock or other share capital . . . of another person engaged also in commerce . . . where in any line of commerce . . . the effect of such acquisition may be substantially to lessen competition, or to tend to create a monopoly.”).

185. See 13 HOVENKAMP, ANTITRUST LAW, *supra* note 6, ¶ 2121c, at 128. The prohibition in Section 5 of the FTC Act against “unfair methods of competition,” see 15 U.S.C. § 18, may provide even broader limits on anticompetitive conduct than either Section 1 of the Sherman Act or Section 7 of the Clayton Act, since the FTC Act requires neither a “contract, combination or conspiracy” nor an “acquisition.” See, e.g., E.I. Du Pont De Nemours & Co. v. F.T.C., 729

Assuming the joint venture's proponents can offer some ostensibly legitimate procompetitive justification, a joint venture is generally analyzed under the rule of reason.¹⁸⁶ As Professor Hovenkamp explains, "[a]t the highest level of generality, joint ventures benefit participants either by permitting them to exercise market power or by reducing their costs" but "[o]nly the latter produces a public benefit."¹⁸⁷ Hovenkamp also notes that because joint ventures often result in procompetitive benefits such as cost reductions, "the legal and economic literature on joint ventures is largely favorable toward them, and antitrust generally begins . . . with a *presumption of legality*."¹⁸⁸ Thus a joint venture should "be condemned or restrained only if the opportunities for increased exercise of market power appear significant in proportion to the likely benefits."¹⁸⁹

Section 1 of the Sherman Act is already understood to prohibit joint ventures among competitors where, under a rule of reason analysis, the anticompetitive risks are found to outweigh the likely procompetitive benefits.¹⁹⁰ This Article proposes that the three trust-facilitating devices highlighted here should be added to the list of recognized anticompetitive risks that a joint venture among competitors may pose.

b) Comparing Pre- and Post-Joint-Venture HHIs: A Threshold Test

An essential preliminary step in the analysis of a joint venture is to assess the concentration levels of each of the markets potentially affected by the venture, though this tool is a threshold test that provides only limited insight. The Herfindahl-Hirschman Index ("HHI") is perhaps the most widely-used measure of market concentration in antitrust law.¹⁹¹ If the HHI indicates concentration levels for a potentially affected market are low, then the likelihood the venture poses serious anticompetitive risks is minimal. If, however, the HHI reveals high

F.2d 128, 136 (2d Cir. 1984) (noting that, in enacting the FTC Act, "Congress's aim was to protect society against oppressive anticompetitive conduct and thus assure that the conduct prohibited by the Sherman and Clayton Acts would be supplemented as necessary and any interstices filled"). But this distinction is not material to the issues discussed here, because joint ventures of the sort with which this Article is concerned can almost always be characterized as a "combination," and thus can be analyzed under Section 1 of the Sherman Act. See 13 HOVENKAMP, ANTITRUST LAW, *supra* note 6, ¶ 2122c, at 128.

186. See Richard W. Pogue, *Antitrust Considerations in Forming a Joint Venture*, 54 ANTITRUST L.J. 926-27 (1985).

187. 13 HOVENKAMP, ANTITRUST LAW, *supra* note 6, ¶ 2121b, at 125-26.

188. *Id.* ¶ 2121b, at 126-27 (emphasis added).

189. *Id.* ¶ 2121b, at 127.

190. See *infra* notes 242-245 and accompanying text.

191. See, e.g., 13 HOVENKAMP, ANTITRUST LAW, *supra* note 6, ¶ 2122b, at 133.

concentrations, it signifies only that further inquiry is necessary to determine the likelihood of serious anticompetitive effects.

In the context of a hypothetical production joint venture similar to that at issue in *In re General Motors Corp.*,¹⁹² Hovenkamp discusses the use of HHIs as a method of analyzing the competitive impact of a joint venture. He argues that a comparison of HHIs “hardly tells the whole story or even a meaningful portion of it.”¹⁹³ Rather, he suggests, as does this Article, that “the real threat from the proposed venture is that the two participants will collude or develop facilitators that enable them to achieve tacit coordination of prices.”¹⁹⁴ Hovenkamp is quick to point out, however, “that while the HHI has increased following the joint venture, the HHI increase has resulted from *increased* market output and the relative disadvantage imposed on the nonventuring rivals.”¹⁹⁵ Thus, he suggests that, “[i]n sum . . . purely structural evidence often tells us almost nothing about the impact of a joint venture.”¹⁹⁶

Nonetheless, a structural analysis of the relevant markets using HHI comparisons can answer some threshold questions. Hovenkamp provides a useful framework for the limited use of HHIs to assess the implications of market concentration:¹⁹⁷

- *Low HHI levels.* “At low levels of concentration HHI numbers are relevant in providing a safe harbor below which competitive concerns cannot be inferred from structure alone.”¹⁹⁸
- *High HHI levels and a joint venture that completely eliminates competition between its parents.* “At higher levels of concentration, durable joint ventures that *completely* eliminate existing competition between the venturers should be regarded with greater concern; as a first cut one might ask whether a complete merger between the two parties would be lawful. . . .”¹⁹⁹
- *High HHI Levels and a joint venture that does not completely eliminate competition between its parents.* “At higher levels of concentration, if the joint venture does not eliminate all existing

192. 103 F.T.C. 374 (1984), *vacated*, 116 F.T.C. 1276 (1993). The *General Motors* case involved a production joint venture between General Motors and Toyota to build and jointly operate a new production facility for automobiles. For further discussion of *General Motors*, see *infra* notes 211–212 and accompanying text.

193. See 13 HOVENKAMP, ANTITRUST LAW, *supra* note 6, ¶ 2122b, at 134.

194. See *id.*

195. See *id.*

196. See *id.* ¶ 2122b, at 135.

197. *Id.*

198. 13 HOVENKAMP, ANTITRUST LAW, *supra* note 6, ¶ 2122b, at 135 (Hovenkamp suggests that “an HHI of 1000, similar to that which is used for the analysis of mergers, seems about right.”).

199. *Id.* ¶ 2122b, at 135.

competition between the venturers, the purely structural analysis can do no more than begin the inquiry.”²⁰⁰

Thus, HHI numbers that demonstrate low levels of concentration provide a strong presumption of legality for a joint venture. And for a joint venture that completely eliminates competition between the venture’s parents, HHIs indicating high levels of concentration may require analyzing the venture as if it were a merger. But for a joint venture that does not completely eliminate competition between players in a highly concentrated market—the factual scenario with which this Article is primarily concerned—HHIs provide only a starting point: an indication that further analysis of the venture is necessary.

2. The Problematic Polarization of Joint Venture Analysis Along Two Routes: Quasi-Merger vs. Front for Cartel

In his antitrust treatise, Hovenkamp provides a comprehensive characterization of the treatment of joint ventures under modern antitrust doctrine. He distinguishes between “two general routes” of joint venture analysis: (1) “a structural analysis very roughly similar to that applied to mergers”; or (2) a challenge to “a particular portion of the joint venture agreement thought to limit competition excessively.”²⁰¹

This Article is concerned with the limitations of both routes of analysis, which—due largely to the fact that they are distinct, non-overlapping paths—may fail to consider the broader anticompetitive aspects of certain joint ventures. The first category of analysis is based on the idea that a joint venture in a concentrated market, similar to a merger in such a market, may “reduce by one the number of market participants.”²⁰² Depending on how the joint venture is structured, however, it may or may not have such a result.²⁰³ Hovenkamp points out, for example, that “the only production joint venture that is structurally similar to the complete merger is the most extreme one, which is relatively uncommon: two firms agree to construct and operate a joint production facility and to close down all independently owned facilities.”²⁰⁴ More commonly, the joint venture parents “agree to make jointly some product that both had made prior to the arrangement and will continue making separately during the joint venture period.”²⁰⁵ Instead of reducing the number of competitors, in many cases a joint

200. *Id.* ¶ 2122b, at 136.

201. *Id.* ¶ 2122a, at 130–31.

202. *Id.* ¶ 2122b, at 131.

203. 13 HOVENKAMP, ANTITRUST LAW, *supra* note 6, ¶ 2122b, at 131.

204. *Id.*

205. *Id.* ¶ 2122b, at 132.

venture may actually add a new competitor to the market, such as when it creates a new, independent firm with different owners.²⁰⁶ Likewise, if a joint venture involves the construction of a new plant, it may actually increase the market's total production capacity—an effect which is, on its face, procompetitive.

When a joint venture adds a new, nominally independent competitor to a market, the threat to competition may come not from a decrease in the number of market participants, but from the possibility that the venture eliminates existing competition between the joint venture participants in markets outside of the venture.²⁰⁷ According to Hovenkamp, “[t]his might happen if the joint venture becomes an excuse for price fixing with respect to the venturers’ nonventure business or if it creates or makes more likely the use of some price-fixing ‘facilitator,’ such as information exchanges, potentially anticompetitive standardization of products or contract terms, joint sales, or the like.”²⁰⁸

What current antitrust analysis of joint ventures fails to scrutinize is the likelihood that the mere *existence* of the joint venture, as opposed to its particular activities or operations, may facilitate price-fixing. Existing doctrine recognizes that even if a joint venture is more than merely “an excuse for price-fixing,” it may facilitate collusion or otherwise reduce competition between its parents. But once the analysis dismisses the possibility that the venture is merely a front for naked restraints (such as price-fixing, production caps, or territorial allocations), the inquiry tends to be limited to the specifics of the joint venture agreement, such as whether the joint venture opens the door to “information exchanges, potentially anticompetitive standardization of products or contract terms, joint sales, or the like.”²⁰⁹ Left out of these considerations are the potential risks inherent in the venture, such as mutual investment, the creation of an interlocking directorate, and the uncertainties (or strategic ambiguities)²¹⁰ that may be created, depending on how explicitly the joint venture agreement articulates the future management and operations of the venture.

Take, for example, Hovenkamp’s criticism of the dissent in the FTC’s *General Motors* decision.²¹¹ The case involved a production joint venture between General Motors and Toyota to build and jointly

206. *Id.*

207. *Id.*

208. 13 HOVENKAMP, ANTITRUST LAW, *supra* note 6, ¶ 2122b, at 132.

209. *See id.*

210. *See supra* notes 127–132 and accompanying text.

211. *See* 13 HOVENKAMP, ANTITRUST LAW, *supra* note 6, ¶ 2122b, at 133 (citing *In re General Motors Corp.*, 103 F.T.C. 374 (1984), *vacated*, 116 F.T.C. 1276 (1993)).

operate a new facility to manufacture automobiles. The dissenting commissioner argued the venture should be condemned because the market in question (automobiles) “is prone to effective collusion, and a collaboration between two major competitors resembles a partial merger more than a true joint venture.”²¹² First, Hovenkamp argues “the construction of an additional plant by the joint venturers, with no added limitation on the number of their independently owned plants or their output, *can hardly be likened to a complete merger* of the firms.”²¹³ Second, Hovenkamp contends the joint venture in question should not be analyzed in terms of its ability to facilitate collusion between its parents because “two firms contemplating collusion, with its attendant output reduction, would not ordinarily undertake to build an additional plant.”²¹⁴ As discussed above, however, amidst a multi-year price-fixing conspiracy in the DRAM industry, Infineon contemplated forming just such a joint venture with its competitor, Toshiba—a venture that would likely increase the market’s overall production capacity.²¹⁵ Hovenkamp’s criticism thus evinces the unnecessary rigidness and polarity of the existing doctrine: if a joint venture is not a cover for collusion among its parents, then it is deemed unnecessary to analyze the venture’s broader collusion-facilitating effects.

Current joint venture analysis tends to be bifurcated, analyzing a joint venture as *either* (a) a possible front for cartel behavior, *or* (b) a partial integration of the joint ventures’ parents—a sort of quasi-merger, analyzed like a merger.²¹⁶ This polarized analysis neglects a vast area of middle ground that is just as fertile for anticompetitive relations. Under the current doctrine, if the analysis takes the merger-analogy route, then the product market of the joint venture is the focus. If, on the other hand, the analysis takes the collusion-facilitation route, then the attention shifts to the internal mechanics of the joint venture itself. For example, such an analysis may question whether the joint venture agreement or operating structure provides for (1) information exchange between the parents; (2) price-fixing; (3) territorial allocations; or (4) output reductions by the parents.²¹⁷

212. *See id.* (quoting *General Motors*, 103 F.T.C. 374).

213. *See id.* (emphasis added).

214. *See id.*

215. *See supra* notes 2–6 and accompanying text.

216. As Areeda and Hovenkamp explain, “[s]ome ‘joint ventures’ are in fact little more than fronts for cartels and, having no lawful purpose, are properly dissolved by antitrust decree. Other joint ventures integrate the participants so completely that they are analyzed in the same way as mergers and can thus be enjoined under merger standards of illegality.” 7 AREEDA & HOVENKAMP, *ANTITRUST LAW*, *supra* note 19, ¶ 1478a, at 319.

217. *See, e.g.*, 13 HOVENKAMP, *ANTITRUST LAW*, *supra* note 6, ¶ 2122b, at 136.

Much has been written regarding the first question—possible information-sharing implications of joint ventures, such as sharing of production numbers, sales forecasts, and marketing plans.²¹⁸ In many cases, however, this sort of information could be exchanged legally outside the context of the joint venture.²¹⁹ And even if it could not be, proof of such exchanges does not, without more, suffice to establish a price-fixing conspiracy.²²⁰ The current analysis also considers whether the joint venture agreement contains provisions that effectively fix prices, reduce output, or allocate territories in the context of competition outside the venture.²²¹ Each of these possibilities, of course, is itself illegal under Section 1 of the Sherman Act, whether it occurs in the context of a joint venture or elsewhere.²²²

What current analyses fail to consider are the broader collusive effects that a joint venture may give rise to by virtue of the competitive markets in which its parents are involved and the trust-facilitating devices that the venture entails. These devices are fundamentally distinguishable from the previously recognized anticompetitive risks that arise from a joint venture's operational structure or the particular terms of a joint venture agreement.

3. Acknowledgment of Possibility of “Spillovers,” But No Substantive Principles to Guide Analysis of These Effects

As characterized by Professors Areeda and Hovenkamp, modern antitrust doctrine acknowledges the possibility of “spillovers” but provides little guidance on how to recognize or analyze these effects.²²³ They discuss, for example, the “competitive dangers” posed by a joint venture between competitors, acknowledging the possibility that the “combination may diminish the parents’ zeal for competing with each other in any market in which they overlap.”²²⁴ Here again, however, the authors focus their analysis and discussion on the competitiveness of the market in which the joint venture itself is engaged.²²⁵

218. *Id.*

219. *Id.*

220. *Id.*

221. *See, e.g.,* *Yamaha Motor Co. v. F.T.C.*, 657 F.2d 971, 981 (8th Cir. 1981) (condemning an agreement requiring that one of the joint venture's parents “not engage in any competitive efforts in the United States market with non-joint-venture outboard motors”).

222. *See* 15 U.S.C. § 1.

223. 7 AREEDA & HOVENKAMP, *ANTITRUST LAW*, *supra* note 19, ¶ 1478b1, at 320 (“The courts examine not only the immediate harms and benefits of a venture, but also . . . the probable spillovers on the parents’ other activities.”).

224. 3 AREEDA & HOVENKAMP, *ANTITRUST LAW*, *supra* note 124, ¶ 703c, at 157.

225. *See id.* ¶ 703c, at 157–58 (“[T]he combination may diminish the parents’ zeal for competing with each other in any market in which they overlap. The future behavior of each parent and

Areeda and Hovenkamp raise the hypothetical example of a monopolist that attempts to create a joint venture with one of its actual or potential competitors—a scenario for which, they advise, “antitrust must be presumptively inhospitable.”²²⁶ While acknowledging “the possibility of redeeming virtue sufficient to justify such a venture,” the authors argue that “only the most compelling justifications should be accepted.”²²⁷ Areeda and Hovenkamp’s hypothetical is narrowly posed, nested within a chapter on monopolization, and specifically considers a *monopolist*. Indeed, this is a rather extreme example and, consequently, an easy case. The logic underlying their observation, however, is consistent with the thesis of this Article and could be extended beyond monopolists. Take, for example, a market involving three equally dominant producers, rather than a monopolist. The trust-facilitating risks of a joint venture between two of the producers (although neither is a monopolist) may likewise be so great as to outweigh any potential procompetitive effects.²²⁸

4. Risk-Sharing, Often Cast As a Procompetitive Virtue, Can Be Equally Effective As a Trust-Facilitating Device

Risk-sharing between joint venture partners is often cast by anti-trust commentators as a procompetitive virtue weighing in favor of the legality of a joint venture. As illustrated above, however, risk-sharing may just as readily be construed as a trust-facilitating device with anticompetitive implications.²²⁹ In their short list of “possible legitimate objectives of joint activity,” Areeda and Hovenkamp mention risk-sharing first.²³⁰ Their precise language suggests that risk-sharing in itself is not virtuous; rather, it is risk-sharing that allows two firms to “form a joint subsidiary to undertake an activity *too risky for either parent alone*.”²³¹ Nevertheless, many other commentators fail to articulate this distinction and suggest risk-sharing is an inherently procompetitive feature of joint ventures among competitors.²³²

its subsidiary is likely to be restrained: each is less likely to enter the other’s market than if they were totally unrelated; and if, say, one or more parents do enter the subsidiary’s market, production and price decisions will inevitably be interrelated.”).

226. *Id.* ¶ 703c, at 158.

227. *Id.*

228. Indeed, this is arguably the case with the Gustafson joint venture between Crompton & Knowles and Bayer. See *supra* notes 105–113 and accompanying text; *infra* notes 266–272 and accompanying text.

229. See *supra* Part II.C.3.

230. 3 AREEDA & HOVENKAMP, ANTITRUST LAW, *supra* note 124, ¶ 703c, at 157.

231. *Id.* (emphasis added).

232. See, e.g., Deborah P. Herman et al., *Effective Interactions and Coordination in Multi-Party Antitrust Trials*, SG065 ALI/ABA 411, 426 (2001) (stating that “[t]o survive antitrust scru-

If, as proposed above, risk-sharing is an effective mechanism for building trust among competitors, the perception of risk-sharing as a presumptively procompetitive feature of joint ventures may be doubly flawed. Consider, for example, the case of a joint venture between competitors that would *not* be too risky for either parent to undertake alone. First, if the joint venture entails sharing substantial risk, existing doctrine would fail to weigh this trust-facilitating device against the legality of the venture. Second, existing doctrine may further compound this error by presumptively viewing the risk-sharing as procompetitive and thus weigh an anticompetitive risk *in favor of* the legality of the venture.

B. *The Collaboration Guidelines Overlook the Risks Posed by Trust-Facilitating Devices*

The *Collaboration Guidelines*, issued jointly by the Federal Trade Commission and the United States Department of Justice in 2000,²³³ provide a general statement of federal antitrust enforcement policy regarding joint ventures. As discussed below, the *Guidelines*, like modern antitrust doctrine generally, stop short of recognizing the anticompetitive risks posed by trust-facilitating devices.

1. Overview of the *Collaboration Guidelines*

Under the *Guidelines*, a joint venture may be either challenged as per se illegal²³⁴ or analyzed under the rule of reason, depending on the particular facts of the case.²³⁵ The discussion here, however, is limited to analysis under the rule of reason because the trust-facilitating effects of joint ventures at the focus of this Article are not the sort of naked restraints on trade that can be characterized as presumptively illegal.

Under the rule of reason, an agency begins its analysis by examining the nature of the agreement, specifically, “the business purpose of the agreement and . . . whether the agreement, if already in operation, has

tiny, a horizontal alliance must demonstrate procompetitive effects, such as the . . . sharing of risk”); Richard T. Rapp, *The Misapplication of the Innovation Market Approach to Merger Analysis*, 64 ANTITRUST L.J. 19, 30 (1995) (noting that “joint research ventures, like production joint ventures, often provide procompetitive benefits” such as “sharing the substantial economic risks involved”).

233. FTC-DOJ, *COLLABORATION GUIDELINES*, *supra* note 13.

234. *Id.* § 3.2, at 8–9 (“Agreements of a type that always or almost always tends to raise price or reduce output are per se illegal.”).

235. *Id.* § 3.3, at 10–11 (“Agreements not challenged as per se illegal are analyzed under the rule of reason to determine their overall competitive effect.”).

caused anticompetitive harm.”²³⁶ The *Guidelines* recognize that “[m]arkets affected by a competitor collaboration . . . may . . . include additional markets in which any participant is an actual or potential competitor,” even if the joint venture does not operate in that market.²³⁷ Thus the likelihood of anticompetitive effects must be assessed with respect to any market potentially affected by the joint venture. As part of this preliminary inquiry, the agencies define the relevant markets, calculate market shares, and assess market concentration.²³⁸

This initial analysis leads to one of three outcomes. If the examination concludes that due to the nature of the agreement and an absence of market power, there is no anticompetitive harm, then the inquiry ends and the agencies do not challenge the venture.²³⁹ If the analysis determines either that anticompetitive harm is likely due to the nature of the agreement or that anticompetitive harm has already resulted, then the agencies will challenge the venture without a comprehensive market analysis.²⁴⁰ If the inquiry indicates only “*possible* competitive concerns,” then the agencies will analyze the venture in greater depth.²⁴¹

While all three possibilities are relevant here, the third is particularly central to this Article. The trust-facilitating devices highlighted by this Article are unlikely to be problematic if the joint venture’s parents cumulatively lack market power in a given market (as in the first possible outcome). At the same time, the likelihood of anticompetitive harm from these devices will not necessarily be evident from the nature of the agreement (as in the second possible outcome). Rather, these devices are likely to raise competitive concerns that require a more rigorous analysis of both the joint venture itself and the venture’s parents’ cumulative market power in the markets in which they compete.

236. *Id.* § 3.3, at 10 (footnotes omitted).

237. FTC–DOJ, COLLABORATION GUIDELINES, *supra* note 13, § 3.32, at 16 (footnotes omitted). A footnote to the quoted language further recognizes that “[p]articipation in the collaboration may change the participants’ behavior in this third category of markets, for example, by altering incentives and available information, or by providing an opportunity to form additional agreements among participants.” *Id.* § 3.32, at 16 n.41. The *Guidelines* provide no guidance, however, as to *how*, *why*, or *when* an agreement might “[alter] incentives” or “provid[e] an opportunity to form additional agreements” regarding a market that is collateral to the joint venture.

238. *Id.* § 3.3, at 11 (footnotes omitted).

239. *Id.* § 3.3, at 10 (footnotes omitted).

240. *Id.* § 3.3, at 10–11 (footnotes omitted).

241. *Id.* § 3.3, at 11 (footnotes omitted) (emphasis added). This analysis typically requires “defin[ing] relevant markets and calculat[ing] market shares and concentration as an initial step in assessing whether the agreement may [a] create or increase market power or [b] facilitate its exercise and thus [pose] risks to competition.” *Id.*

If a more rigorous analysis of market power and the joint venture is required, then the agencies consider the extent to which the parents and the joint venture have the ability and incentive to compete with each other.²⁴² If this more thorough inquiry indicates that anticompetitive harm is unlikely, then the agencies end their investigation without considering procompetitive benefits.²⁴³ If, however, the more rigorous examination indicates a likelihood of anticompetitive harm, the agencies examine whether the venture is reasonably necessary to achieve procompetitive benefits that would likely offset the anticompetitive harms.²⁴⁴ Thus, in accord with modern antitrust doctrine generally, the *Guidelines* require that any potential anticompetitive harms ultimately be weighed against any likely procompetitive benefits in order to determine the legality of a joint venture.²⁴⁵

2. Trust-Facilitating Devices Are Outside the Scope of Factors Currently Recognized by the *Collaboration Guidelines*

While the *Guidelines* provide a sound general framework for analyzing joint ventures, they fail to properly recognize trust-facilitating risks. With general recommendations to analyze the “nature of the relevant agreement,” the *Guidelines* take small steps toward, but nonetheless stop short of, recognizing trust-facilitating devices.²⁴⁶ The *Guidelines* note, for example, that “by limiting independent decision making or combining control over or financial interests in production, key assets, or decisions on price, output, or other competitively sensitive variables, an agreement may create or increase market power or facilitate its exercise by the collaboration, its participants, or both.”²⁴⁷ At first glance, this statement might seem to cover the risks highlighted above; the general risk of “limiting independent decision making” might appear to incorporate interlocking directorates, and “combining control over financial interests” might seem to include mutual investment by the venture’s parents. A closer reading, however, reveals this statement is too narrowly tailored to encompass any of the three trust-facilitating devices. The specificity with which the

242. FTC–DOJ, *COLLABORATION GUIDELINES*, *supra* note 13, § 3.3, at 11. The *Collaboration Guidelines* specify particular factors which may be considered under this more-rigorous analysis, such as: (1) “whether an agreement is exclusive or non-exclusive and its duration”; (2) “whether entry would be timely, likely, and sufficient to deter or counteract any anticompetitive harms”; and (3) “any other market circumstances that may foster or impede anticompetitive harms.” *Id.*

243. *Id.*

244. *Id.* § 3.3, at 11–12.

245. *See supra* notes 188–190 and accompanying text.

246. FTC–DOJ, *COLLABORATION GUIDELINES*, *supra* note 13, § 3.31, at 12.

247. *Id.*

terms are qualified indicates the risks are relevant only with respect to the “production, key assets, or decisions on price, output, or other competitively sensitive variables” of the joint venture.²⁴⁸

The *Guidelines* thus reveal concern only about the anticompetitive risks posed by parent’s control over, and interest in, the particular competitively-sensitive variables within a joint venture. This narrow scope of analysis excludes the anticompetitive risks posed by the macro-level appendages of the parents that form the broader contours of the joint venture—mutual investment, interlocking directorates, and risk-sharing.

Perhaps the closest the *Guidelines* come to recognizing the risks of trust-facilitating devices is in the statement that, “An agreement also may increase the likelihood of an exercise of market power by facilitating explicit or tacit collusion, either through facilitating practices such as an exchange of competitively sensitive information or through market concentration.”²⁴⁹ Here, the *Guidelines* recognize that a joint venture may facilitate explicit or tacit collusion. Once again, however, this recognition is limited to: (1) “facilitating practices,” such as the exchange of information, and (2) increased “market concentration.” The “facilitating practices” to which the *Guidelines* refer presumably do not (but should) include the trust-facilitating devices highlighted by this Article. Likewise, reference to “market concentration” was likely intended to refer to literal increases in market concentration—such as would result from a production joint venture in which each parent shut down its individual production facilities—rather than the effective (but non-literal) increases in market concentration that may result from trust-facilitating devices.

The *Guidelines*’ failure to recognize trust-facilitating devices is further confirmed by their elaboration on the relevant factors for analysis. The *Guidelines* specify six factors concerning “the ability and incentive of the participants and the collaboration to compete.”²⁵⁰ Of

248. *Id.*

249. *Id.*

250. *Id.* § 3.34, at 18–19. The six factors are:

- (1) “the extent to which the relevant agreement is non-exclusive in that participants are likely to continue to compete independently outside the collaboration in the market in which the collaboration operates”;
- (2) “the extent to which participants retain independent control of assets necessary to compete”;
- (3) “the nature and extent of participants’ financial interests in the collaboration or in each other”;
- (4) “the control of the collaboration’s competitively significant decision making”;
- (5) “the likelihood of anticompetitive information sharing”; and
- (6) “the duration of the collaboration.”

these six factors, only the third and fourth are directly relevant to the trust-facilitating devices highlighted by this Article. The third factor, “the nature and extent of participants’ financial interests in the collaboration or in each other,” might appear to encompass significant mutual investment, the first trust-facilitating device highlighted by this Article. Likewise, the fourth factor, “control of the collaboration’s competitively significant decision making” is related to interlocking directorates, the second trust-facilitating device.

Again, however, the *Guidelines*’ elaboration on each makes clear that these factors do not encompass anticompetitive risks of the sort considered by this Article. For example, in discussing the third factor, the “financial interests in the collaboration or each other,” the *Guidelines* state that, “[i]n general, the greater the financial interest in the collaboration, the less likely is the participant to compete *with the collaboration*.”²⁵¹ The *Guidelines* thus stop short of recognizing that the greater the financial interest in the collaboration, the less likely the participant is to compete with fellow participants.²⁵² Similarly, under the *Guidelines*, an agency would “also assess *direct* equity investments between or among participants,” as these “may reduce the incentives of the participants to compete with each other.”²⁵³ Here again, however, the *Guidelines*’ language is narrowly constructed, acknowledging the risk of competitors’ direct investments in each other (a risk long-recognized under antitrust doctrine),²⁵⁴ but failing to recognize that significant *mutual investment* in a third entity (the joint venture) may have comparable anticompetitive effects. The *Guidelines* thus come close to, but ultimately fail to recognize, one of the key anticompetitive risks highlighted by this Article: the greater the participant’s financial interest in the collaboration, the less likely the participant is to compete with another participant.

In discussing the fourth factor, “control of the collaboration’s competitively significant decision making,” the *Guidelines* explain the agencies’ concern as “the extent to which the collaboration’s govern-

Id.

251. FTC-DOJ, COLLABORATION GUIDELINES, *supra* note 13, § 3.34(c), at 20 (emphasis added).

252. *See supra* Part II.C.1.

253. FTC-DOJ, COLLABORATION GUIDELINES, *supra* note 13, § 3.34(c), at 20 (emphasis added).

254. *See, e.g.*, Clayton Act, ch. 323, § 7, 38 Stat. 730, 731 (1914) (current version at 15 U.S.C. § 18 (2006)) (prohibiting acquisition by one corporation of “the whole or any part of the stock or other share capital . . . of another [corporation] . . . where in any line of commerce . . . the effect of such acquisition may be substantially to lessen competition”); *FCC v. Nat’l Citizens Comm. for Broad.*, 436 U.S. 775 (1978) (approving, based in part on antitrust policies, FCC rules that prohibit cross-ownership of newspapers and broadcast media outlets in the same market).

ance structure enables the collaboration to act as an independent decision maker.”²⁵⁵ Again, although this language might seem to embrace the anticompetitive risks posed by indirect interlocking directorates, the *Guidelines* make clear that this factor should be concerned with the competitive motivations of the joint venture, not its parents.²⁵⁶

V. PROPOSED MODIFICATIONS TO THE *COLLABORATION GUIDELINES*: RECOGNIZING THE RISKS OF TRUST-FACILITATING DEVICES

Although the *Collaboration Guidelines* do not bind courts, they are a statement of general policy for federal antitrust enforcement agencies.²⁵⁷ Furthermore, like the FTC–DOJ *Merger Guidelines*,²⁵⁸ the *Collaboration Guidelines* are likely to influence judicial decisionmaking.²⁵⁹ It is important, therefore, that the *Collaboration Guidelines* recognize and acknowledge serious anticompetitive risks, such as those posed by significant mutual investment, indirect interlocking directorates, and sharing of substantial, ongoing risk. This section proposes modifications to the *Guidelines* that would recognize these three trust-facilitating devices.

First, the *Guidelines* would effectively recognize significant mutual investments by adding the following proposed language (which is underlined) to Section 3.34(c): “In general, the greater the financial interest in the collaboration, the less likely is the participant to compete with the collaboration or the other participants.”²⁶⁰ Indeed, the *Guidelines* already provide the useful insight that “the analysis is sensitive to the level of financial interest . . . relative to the level of the

255. FTC–DOJ, *COLLABORATION GUIDELINES*, *supra* note 13, § 3.34(d), at 20.

256. *Id.* The *Guidelines* explain that “[i]n general, the collaboration is less likely to compete independently as participants gain greater control over the collaboration’s price, output, and other competitively significant decisions.” *Id.* (emphasis added).

257. *See supra* note 233 and accompanying text.

258. FTC–DOJ, *MERGER GUIDELINES*, *supra* note 111.

259. *See* David Lee, *The Lack of Guidance for Proving the Pricing-Below-Cost Element of Predatory Pricing and a Call for a Revised Approach to Predatory Pricing*, 56 ADMIN. L. REV. 1285, 1305 n.132 (2004) (noting that the antitrust agencies are generally “influential on the courts as evidenced by, for example, the courts regular use of the FTC/DOJ Merger Guidelines in merger cases”); *see also* William J. Kolasky & Andrew R. Dick, *The Merger Guidelines and the Integration of Efficiencies into Antitrust Review of Horizontal Mergers*, 71 ANTITRUST L.J. 207, 235 (2003) (noting that “review of the case law shows that the Merger Guidelines have been influential in shaping the courts’ approach to efficiencies, just as they have been in other areas”).

260. *Compare* FTC–DOJ, *COLLABORATION GUIDELINES*, *supra* note 13, § 3.34(c), at 20. Section 3.34(c) of the *Guidelines* provides a description of the third factor “relevant to the ability and incentive of the participants and the collaboration to compete,” which is entitled “Financial Interests in the Collaboration or in Other Participants,” *see id.*, and which is discussed above in *supra* text accompanying notes 251–254.

participant's investment in its independent business operations in the markets affected by the collaboration."²⁶¹ The addition of the proposed text would provide a general framework for analysis of significant mutual investment which, as discussed above, hinges on the ratio of a company's investment in the joint venture to that company's annual sales in a market in which it competes with any of the joint venture's other parents.²⁶²

Second, the *Guidelines* would effectively recognize indirect interlocking directorates by adding the following suggested language (which is underlined) to Section 3.34(d):

The Agencies consider the manner in which a collaboration is organized and governed in assessing the extent to which participants and their collaboration have the ability and incentive to compete independently. Thus, the Agencies consider the extent to which the collaboration's governance structure enables the collaboration and its participants to act as an independent decision makers and independent competitors.²⁶³

With these modifications, the *Guidelines* would recognize that a joint venture that creates an indirect interlocking directorate may pose a risk to competition between the joint venture and any one of its parents, as well as to competition *between the joint ventures' parents*.

Finally, the *Guidelines* could be modified to recognize the potential anticompetitive harm caused by the sharing of substantial, ongoing risk by adding the following section as a new, seventh factor relevant to the ability and incentive of the parents and the venture to compete:²⁶⁴

3.34(g) Sharing of Substantial, Ongoing Risk.

The Agencies consider the level of ongoing risk shared by the participants in assessing whether participants retain the ability and incentive to compete against each other and their collaboration. In general, the greater the level of ongoing risk that is shared by the participants, the less likely participants are to compete against each other and their collaboration. Estimating the level of ongoing risk shared by a collaboration's participants requires consideration of

261. FTC-DOJ, COLLABORATION GUIDELINES, *supra* note 13, § 3.34(c), at 20.

262. *See supra* Part II.C.1.

263. *Compare* FTC-DOJ, COLLABORATION GUIDELINES, *supra* note 13, § 3.34(d), at 20. Section 3.34(d) of the *Guidelines* provides a description of the fourth factor "relevant to the ability and incentive of the participants and the collaboration to compete," which is entitled "Control of the Collaboration's Competitively Significant Decision Making," *see id.*, and which is discussed above in *supra* text accompanying notes 255-256.

264. *See* FTC-DOJ, COLLABORATION GUIDELINES, *supra* note 13, § 3.34, at 18-19. As discussed above, *see supra* note 250 and accompanying text, the *Guidelines* presently include only six factors "relevant to the ability and incentive of the participants and the collaboration to compete." *See* FTC-DOJ, COLLABORATION GUIDELINES, *supra* note 13, § 3.34(a)-(f), at 18-21.

the maximum long-term losses or profits that each participant in the collaboration may potentially sustain, the likelihood of sustaining long-term losses or profits of such magnitude, and the relative amount of sales that each participant has in any markets in which the participants compete with each other. Any significant ambiguity in the terms of the relevant agreement, particularly with respect to termination provisions (or lack thereof), is also likely to decrease the participants' incentive to compete against each other and their collaboration.

The addition of this language to the *Guidelines* would effectively recognize both the general anticompetitive risk posed by risk-sharing among competitors, and the more specific risk entailed by joint venture agreements that employ strategic ambiguity.²⁶⁵

VI. CONCLUSION

The three trust-facilitating devices highlighted in this Article are mechanisms that may increase trust among competitors who are also partners in a joint venture, irrespective of the market in which the joint venture operates. Where a joint venture's parents are competitors in a highly concentrated market, these devices provide effective solutions to both of the prisoner's dilemmas, as well as the third, intra-corporate dilemma—and thus encourage, enable, and reinforce collusion in the competitive market.

With the rising popularity of game-theory-inspired corporate strategy—a trend that is perhaps best captured by Professors Brandenburger and Nalebuff's *Co-opetition*—corporate executives are ever more likely to understand the economic benefits of monopolization, market power, and undersupplying a market, as well as the advantages to be gained by establishing and exploiting “links between games.” Corporate executives are thus increasingly aware both of the principles that make joint ventures such effective mechanisms for creating and maintaining trust among competitors and of the supra-competitive profits that such trust may entail. Antitrust analysis of joint ventures therefore should also be cognizant of these anticompetitive effects.

The proposed modifications to the *Collaboration Guidelines* would recognize the trust-facilitating effects of joint ventures among competitors by adding three critical factors for antitrust enforcement agencies to consider when analyzing joint ventures under the rule of reason. Take, for example, the Gustafson joint venture in the seed-treatment business, discussed above, in which Crompton & Knowles and Bayer

265. See *supra* notes 127–132 and accompanying text.

each invested roughly \$140 million.²⁶⁶ Under the analysis proposed above in the suggested revision to Section 3.34(c) of the *Guidelines*, this \$140 million would be compared to the estimated \$100 million in annual sales that each company had as nominally independent competitors in the rubber chemicals market. As explained above, this calculation would yield a percentage ratio of 140%, indicating that the mutual investment by each parent company in the joint venture was highly significant with respect to each company's interest in the market in which they compete.²⁶⁷

Given each parent company's significant mutual investment in Gustafson and the fact that the potentially affected market is highly concentrated,²⁶⁸ the *Guidelines*, if revised as proposed here, would have encouraged a reviewing agency to challenge the joint venture. To the extent that courts are influenced by the *Collaborations Guidelines* (as they are by the *Merger Guidelines*),²⁶⁹ these revised *Guidelines* also would have encouraged a reviewing court to block or break up the joint venture. In actuality, however, the Gustafson joint venture was not subject to any serious public scrutiny—much less a legal challenge—by federal antitrust agencies, either when it was formed in 1998 or at any time after.²⁷⁰

Five years after the formation of the Gustafson joint venture, an investigation by the Justice Department revealed an international price-fixing conspiracy in the rubber chemicals market that began in 1995 and lasted until 2001.²⁷¹ Thus, at the time the Gustafson joint venture was formed between Crompton and Bayer, the two companies were already co-conspirators in the rubber chemicals cartel. Bayer and Crompton, much like the DRAM producers discussed above,²⁷² decided to form a joint venture even as they were entrenched in a multi-year global price-fixing conspiracy. The trust-facilitating devices created by the Gustafson joint venture likely reinforced the conspiracy in the rubber chemicals market by substantially increasing trust among two of the three dominant producers, thus helping solve the three dilemmas that price-fixing cartels inherently face.

266. See *supra* notes 105–113 and accompanying text.

267. See *supra* notes 105–113 and accompanying text.

268. See *supra* notes 105–111 and accompanying text.

269. See *supra* notes 258–259 and accompanying text.

270. A search of Westlaw and Lexis's comprehensive news archive databases yielded no evidence of any antitrust challenge to the Gustafson joint venture.

271. See *Rubber Chemicals Price-Fixing Probed*, CHEM. & ENG'G NEWS, Oct. 14, 2002, at 17; Press Release, U.S. Dep't of Justice, Crompton Corporation Agrees to Plead Guilty for Participating in Rubber Chemicals Cartel (Mar. 15, 2004), available at http://www.usdoj.gov/atr/public/press_releases/2004/202815.htm.

272. See *supra* notes 2–6 and accompanying text.

The proposed revisions to the *Guidelines* would counsel antitrust enforcement agencies—and likely courts as well—to challenge and block joint ventures such as Gustafson that pose serious risks to the vitality of competition among a joint venture's parents, even if the venture is in a market separate from that in which its parents compete.