Antitrust, Vol. 33, No. 3, Summer 2019.

Perils of the Perilous-Leading Theory and Output Decisions

BY JEFFREY S. SPIGEL, JOHN D. CARROLL, MATTHEW P. LIST, AND CHRISTOPHER C. YOOK

IN A RECENT DECISION INVOLVING allegations of coordinated output restrictions, the Seventh Circuit applied in dicta a rarely used theory called "perilous leading" to categorize the legality of supply decisions under Section 1 of the Sherman Act based upon their permanence—as either "less reversible" or "easily reversed." The court's application of the perilous-leading theory assumes that a firm acting unilaterally in a competitive environment would not take a long-term supply cut (such as closing a facility) where competitors could capture the lost sales, even if that firm's own supply exceeds the demand for its products. But the perilous-leading theory can also create perverse incentives by discouraging firms from rationally matching output with demand conditions to operate efficiently. Courts evaluating output restrictions should thus consider additional factors to accurately account for economic realities.

The *Kleen Products* Decision

In *Kleen Products*, the plaintiffs claimed that seven paper producers engaged in a conspiracy to fix prices and restrict output for containerboard, a material used to make corrugated boxes and other products.[1] Defendant producers allegedly engaged in a series of parallel price increases from 2004 to 2010, while simultaneously cutting back containerboard production in violation of Section 1 of the Sherman Act.[2] Following class certification, all but two producers, Georgia-Pacific and WestRock,[3] settled.

The district court subsequently granted summary judgment in favor of the remaining defendants, finding that the individual companies did not uniformly follow the price increases and that customers rejected several of the price increases.[4] As for the output restrictions, the district court held that the near-contemporaneous capacity reductions did not create a reasonable inference of an unlawful conspiracy. It reasoned that the producers "can act in their independent self-interest even when they turn away business" and that "even in the absence of an illicit agreement, [d]efendants may choose not to chase after every business opportunity."[5]

On appeal, the Seventh Circuit affirmed summary judgment in favor of the defendants but took a different route than the district court as to the absence of liability. First, the court agreed that the defendants' alleged lockstep price increases were not as uniform or consistent as the plaintiffs had claimed.[6] The Seventh Circuit found similar shortcomings in other circumstantial evidence, including the lack of enforcement mechanisms to punish the cheaters deviating from the alleged agreement. Next, addressing the supply decisions and looking specifically at the evidence against one of the defendants, it affirmed that the defendant's bankruptcy discharged antitrust liability for its pre-bankruptcy supply cuts. But the court stated, in dicta, that the defendant's decision to close certain paper mills was the most compelling evidence of potential participation in a conspiracy prior to bankruptcy.[7]

The court characterized supply cuts as either less reversible or easily reversible based on the perilous-leading theory presented by Professors Phillip Areeda and Herbert Hovenkamp.[8] Under this theory, easily reversible supply decisions are those consistent with self-interested decision making and therefore not supportive of a conspiracy claim. On the other hand, supply decisions that are less reversible (i.e., more permanent or difficult to undo) are more suggestive of an agreement. This is because "[f]irms take significant risks by reducing their output in an inflexible manner, unless there is an enforceable agreement in place to ensure that competitors will follow suit."[9]

Applying these general principles to *Kleen Products*, the Seventh Circuit characterized the defendants' paper mill closures as less reversible and their throttled production at existing paper mills by taking downtime (i.e., running at less-than-full capacity) as easily reversible.[10]

The Perilous-Leading Theory

The perilous-leading theory assumes that the potential risks to a firm leading a price increase or other business decision can be so great that "no rational firm will take the first step without advance assurance that rivals will follow."[11] It also assumes that "prompt reversibility probably indicates that only a very modest loss would attend the failure of rivals to follow a would-be leader."[12] In other words, a firm must weigh the likelihood that other firms will follow its lead, and if it takes an easily reversible action, the firm risks little if others do not follow.

Only a handful of decisions have relied on the perilous-leading theory or discussed it in any level of detail; two of these cases are examined below.

Jeffrey S. Spigel and John D. Carroll are partners, and Christopher C. Yook is a senior associate at King & Spalding LLP; Matthew P. List is a principal at Charles River Associates. The authors' firms of King & Spalding LLP and Charles River Associates were previously engaged by WestRock Company on matters unrelated to the Kleen Products *litigation.*

In re Coordinated Pretrial Proceedings in Petroleum Products Antitrust Litigation.[13] The Ninth Circuit reversed a district court's grant of summary judgment in favor of defendant oil companies facing allegations of a price-fixing conspiracy, as well as an alleged conspiracy to jointly curtail their production of crude oil and refined oil products between 1975 and 1977. Somewhat confusingly, the Ninth Circuit looked to evidence that the oil companies declined to expand refining capacity despite long-term forecasts of a future shortage as suggestive of an agreement to reduce capacity:

> A single company reducing output would lose market share and sales. Only if all the companies reduced supply would the price rise enough to increase profits. The risk involved in leading a supply reduction suggests that purely interdependent supply decisions are unlikely. Changes in refinery capacity *are not readily reversible*. Once a company is committed to reducing its capacity it cannot easily recover if the other companies do not follow its lead. Thus, it is unlikely that a firm would undertake a reduction in its refinery capacity without some advance agreement from competitors.[14]

The Ninth Circuit held that the district court should have permitted the case to go to trial where the evidence permitted a plausible inference of conspiracy.[15] The evidence was not limited to reductions in refinery capacity, but also included a number of exchanges of detailed data among the competitors regarding actual production levels, projected future demand, and supply projections.[16]

In re Plasma-Derivative Protein Therapies Antitrust Litigation.[17] The plaintiffs alleged that the two largest producers of plasma-derivative therapies conspired with a trade association to restrict output. As evidence of a conspiracy, the plaintiffs highlighted the defendants' four successive announcements of production cuts over a nine-month span followed by a defendant's plant closures.[18] The court led off its discussion of supply cuts by noting that decreasing supply in a time of increased demand "would not necessarily suggest the firms are acting pursuant to an agreement. . . . [or] contrary to independent self-interest."[19] But based on the temporal aspect of the defendants' supply reductions, and the years required for regulatory approval to later expand production, the court concluded the defendants' actions were not suggestive of independent actions. It reasoned that the supply cuts constituted perilous leading "because, absent an agreement, the first firm to move takes a significant risk that competitors won't follow."[20]

Shortcomings of Focusing on Reversibility of Output Decisions

In a market prone to interdependence, a fact finder should not find a firm liable for choosing a less-reversible supply cut without additional circumstantial evidence of a conspiracy. Section 1 of the Sherman Act requires more than generalized allegations of lockstep production curtailments; it requires agreement. And "[i]ndividual production curtailment decisions, even when each producer rests its own decision upon its belief that competitors will do the same, do not constitute an unlawful agreement."[21] Although this type of parallel conduct alone is not enough to infer agreement, courts can rely on "plus factors": "'(1) evidence that the defendant had a motive to enter into a price-fixing conspiracy, (2) evidence that the defendant acted contrary to its interests, and (3) evidence implying [the existence of] a traditional conspiracy. . . .'"[22]

An economically rational firm may decide to close a facility based on something other than a reciprocal arrangement with competitors. In a competitive oligopoly, rational firms acting unilaterally would take into account the expected reactions of competitors when making decisions related to prices or output. After all, a firm can find itself underwater quickly if it has not managed to balance its production with the expected demand. A rational firm would consider the expected response of competitors as only one among the myriad factors leading to its decision to close a facility. But the perilous-leading theory fails to account for these other factors that a firm may weigh in deciding to reduce capacity, such as eliminating high-cost production facilities when demand for its products has decreased.

Courts have stretched the perilous-leading theory beyond the original concept that output reduction can signal collusion. In *Petroleum Products*, for example, the court relied on the firms' failure to *add capacity* as suggestive of an agreement. The defendants had more crude oil production and refining capacity than necessary to keep their regular customer base and company-owned stations supplied.[23] Notwithstanding evidence of significant costs to add capacity, environmental challenges, and uncertainty as to crude oil supplies and demand for refining capacity, the Ninth Circuit characterized the defendants' decisions not to expand as "mutual decelerations of increases in production capacity."[24]

In its investigations, the Department of Justice Antitrust Division has recognized that a rational firm acting unilaterally can choose to close capacity. For example, during its investigation of International Paper's acquisition of Temple-Inland, the DOJ alleged that the transaction could give the combined company a unilateral incentive to close containerboard capacity.[25] To appreciate why a firm may decide unilaterally to close capacity, one must consider that a firm factors in more than the potential impact on prices.

When a firm considers closing capacity, it must weigh the potential benefits and costs associated with closure. A firm may see a potential benefit from higher prices on its remaining post-closure sales, but competitor responses to the post-closure price pressure will impact the magnitude of benefit. If competitors increase their own output in response to the closure, this will mitigate the magnitude of any attempted price increase. The plaintiffs in the *Kleen Products* litigation assumed that some arrangement among competitors led the firms to respond to output reductions less aggressively than they would have if each competitor acted in its own self-interest.

But a firm that reduces capacity can realize potential benefits other than higher prices. After closing a facility, a firm may realize substantial savings from no longer incurring the fixed costs associated with operating the facility, particularly if that facility operates at a high cost relative to other facilities in that firm's production network. The firm will also realize cost savings from forgoing investments necessary to operate, such as upgrades to comply with safety or environmental regulations or capital expenditures to maintain essential equipment. A firm with multiple facilities seeking to reduce its fixed costs may especially benefit from closing a relatively higher-cost facility because it can allocate the output to a more-efficient facility with excess capacity. In this way, a rational firm acting unilaterally would close capacity instead of continuing to operate a higher-cost facility at lower utilization.

A firm will also consider the costs associated with closing capacity. One cost consists of the forgone profits on any lost sales. However, as discussed previously, a firm may mitigate its loss of sales from closure if it has excess production capacity in its other facilities. Additional costs associated with a plant closure include severance costs, as well as environmental and remedial costs associated with ceasing operations. A firm may also face logistical costs in the form of having to rearrange shipments and production schedules in order to continue to serve remaining customers. Finally, the firm may lose the benefit of optionality once it closes the plant. In other words, if market conditions change and the firm wishes to reopen the plant, it may not have the option to do so, or it may, at a minimum, incur costs associated with re-starting operations. In this way, a firm's *unilateral* decision to close capacity will take into account the reversibility of the capacity reduction.

Scrutiny of Output Decisions Can Lead to Perverse Incentives

In *Matsushita*, the Supreme Court cautioned that "mistaken inferences" in applying the antitrust laws can discourage economically rational or beneficial behavior.[26] Applying the perilous-leading theory to infer the existence of collusion based purely on a firm's decision to close capacity would create perverse incentives that could lead to competitive harm.

Suppose that the courts adopted a standard that a firm's decision to close capacity could serve as prima facie evidence of a collusive agreement. Firms may then rationally choose to continue operating facilities that they otherwise would have had a unilateral incentive to close. While this could lead to greater output in this counterfactual world, at least temporarily, this does not mean that consumers would be better off.

If unable to close capacity without risking a Section 1 violation, firms may choose to run facilities at a lower operating rate. This could be a costly choice, as firms in the market may incur higher fixed costs than they would if free to remove unneeded or inefficient capacity. The presence of excess capacity could also present a barrier to entrants. A competitor may be reluctant to make a capital investment in a new plant if it observes that existing competitors possess excess capacity. Because new facilities would likely be more efficient than older facilities, with lower costs of operation, raising barriers to new plants entering the market would make consumers worse off. In fact, a firm may consider future entry of new, low-cost capacity into the market when making the unilateral choice to close capacity today. If competitors enter with more-efficient capacity, it may be economically rational for a firm to close older, higher-cost capacity.

Applying the perilous-leading theory to infer the existence of collusion based purely on a firm's decision to close capacity would create perverse incentives that could lead to competitive harm.

Similarly, a firm considering a capital investment to convert a plant from the manufacture of one product to the manufacture of another product in a separate market may be dissuaded if such a project could be viewed as a less-reversible output reduction in the original product. Even if market forces created a unilateral incentive for the firm to cease production of one product in favor of another, a perilous-leading standard may pigeonhole the firm into a less-efficient allocation of capital if the change in production could not be easily reversed (e.g., the firm would have to retool a plant in order to shift production).

In addition to keeping inefficient capacity in operation, punishing firms for closing capacity could, in some circumstances, make a collusive agreement easier to implement. Economists have long recognized a collusive agreement requires a punishment mechanism to deter cheating among co-conspirators. If a group of firms collude to raise price, one punishment mechanism could involve the threat of using excess capacity to undercut any firm that deviates from the conspiracy. The 1997 revisions to the Horizontal Merger Guidelines recognized this potential, noting that "excess capacity in the hand of non-maverick firms may be a potent weapon with which to punish deviations from the terms of coordination."[27]

The uncertainty of what constitutes a less-reversible output decision would only serve to further complicate the practical implementation of a perilous-leading standard. Areeda and Hovenkamp note that the "relative ease with which an unfollowed move can be reversed" can be gauged "[i]n very rough terms."[28] But this vague description does not provide a triable standard. For instance, while a plant closure might be seen as irreversible *ex ante*, firms can and have restarted closed facilities. In this sense, one cannot easily define a "permanent" closure.

The Seventh Circuit recognized the potential for other practical complications in its *Kleen Products* decision, such as one alleged co-conspirator purchasing a new mill during a period where plaintiffs alleged a conspiracy among firms to reduce capacity.[29] It is difficult to see how a perilous-leading standard could be applied to an industry where firms may be closing some existing capacity while opening new capacity. It would be counter-productive, for example, to create a standard that may reduce firms' incentive to replace older, high cost capacity with newer, low-cost capacity.

Practical Applications

Courts have recognized that plaintiffs may support allegations of collusion with circumstantial evidence "from which the fact finder may infer agreement."[30] However, fact finders must be cautious not to confuse parallel behavior with collusion. Courts addressing allegations of collusive output restrictions can use the analytical framework outlined below to reduce the risk of false positives inherent in the perilous-leading standard.

Regardless of whether courts adopt this framework, companies should continue to align supply with demand conditions. Although companies are always well advised to clearly document the procompetitive business rationale for output decisions, this is especially true for facility closures. Companies operating in concentrated industries or those with high rates of enforcement actions may consider alternative approaches to outright closure of facilities (e.g., downtime or temporary shutdowns of lines). But again, an errant legal standard should not discourage economically rational decision-making, particularly if closure is the most cost-effective path forward.

Market Concentration and Demand Conditions. The Seventh Circuit's *Kleen Products* opinion considered the "structural features" of the containerboard market, including the number of firms and the nature of demand. It is important to consider the salient characteristics of a market when considering an allegation of collusion, but it is equally important not to review each factor in isolation. For instance, the Seventh Circuit noted that although a smaller number of competitors may make it easier to support a collusive arrangement, a market with a small number of competitors may also lead to conscious parallelism. This type of conscious parallelism occurs when each firm, recognizing the interdependent nature of its actions and those of its competitors, unilaterally behaves in a manner that considers the expected reactions of others.[31] A large number of firms of varying sizes (or varying costs of production), on the other hand, may give firms a greater incentive to deviate from a collusive agreement.

To properly evaluate a firm's output decisions, one must also consider the demand conditions. Even if the firm expects demand to increase or remain stable, it may decide to close capacity if it believes it can use remaining excess capacity to continue to serve its customers. A firm also may choose to close older, less-efficient capacity if demand has attracted the entry of new, more-efficient capacity. Likewise, a firm may choose to close capacity if it would otherwise have to make significant capital outlays in order to keep the capacity in operation (e.g., if a plant required upgrades to comply with new regulations). Simply put, because a firm's output decisions reflect the dynamic nature of supply and demand, an evaluation of alleged collusion cannot be made in a vacuum or by assuming a static marketplace.

Historical Context. Output decisions should be considered against the backdrop of historical behavior in response to prior cyclical changes in demand conditions. This approach is not novel; industry context is often considered as part of evaluating circumstantial evidence of collusion. For example, in *Twombly* the Court stated that "complex and historically unprecedented changes in pricing structure made at the very same time by multiple competitors" could give rise to an inference of an unlawful agreement.[32] Similarly, lower courts have recognized that "a marked change in defendants' behavior in the market" can suggest the presence of conspiratorial conduct.[33] In *Standard Iron Works v. AcelorMittal*, a court denied a motion to dismiss claims against defendant steel producers that had cut supply, finding that the defendants' alleged behavior deviated from historical precedent in the market:

> The industrial culture here, characterized by fierce competition and a longstanding strategy of maximizing utilization and output, does not similarly explain the massive, unprecedented, and coordinated output cuts by Defendant steel manufacturers. If the drastic output cuts were so clearly and obviously in each Defendant's own self-interest, if the cuts were as "natural and predictable" as Defendants claim, then why didn't each manufacturer implement them sooner?[34]

Also, in *Kleen Products*, the Seventh Circuit looked at the historical context in reasoning that Georgia-Pacific's decision to take downtime at its paper machines was consistent with its past practices.[35]

Independent, Non-Conspiratorial Reasons for Supply Shortages. As is already required under Matsushita, courts weighing summary judgment motions should continue to look to independent, non-conspiratorial reasons for supply shortages. Although the Ninth Circuit later reversed the summary judgment decision below, the district court in *Petroleum Products* initially found it difficult to pin responsibility for the gasoline supply shortage on the defendants. It reasoned that the future demand is inherently difficult to predict with precision, stating, "A considerable amount of time is necessarily involved between a decision that a new refinery is needed and bringing it on steam, and the evidence points up the difficulty in striking a balance between too much production and not enough."[36] The district court also considered several independent reasons for the gasoline shortages in the early 1970s, including increased levels of automobile usage, popularity of vehicles with air conditioning and other fuel-intensive features, and severe weather conditions during the winter of 1972–73.[37]

Punishment Mechanisms. Courts and economists have consistently expressed the necessity of employing mechanisms to detect and punish cheating in collusive arrangements.[38] In a collusive scheme that successfully raises price, each co-conspirator will face an incentive to cheat and earn even greater profits unless the scheme includes a credible punishment mechanism. In an output-fixing conspiracy, a firm may be tempted to cheat by reneging on its promise to reduce its own output. In such a scenario, other conspirators might punish the cheater by expanding output to drive prices down. If firms in the same market take truly irreversible steps to reduce output, such a punishment mechanism becomes less likely.

Conclusion

The perilous-leading theory may be a valid tool to evaluate certain pricing arrangements as potentially collusive, but the theory has inherent weaknesses when applied to output decisions. Reductions in production—and even more permanent decisions, such as plant closures—may be economically rational and motivated by procompetitive reasons, such as the avoidance of high fixed costs. Further, using the perilous-leading theory to evaluate simultaneous or near-simultaneous supply cuts can discourage economically rational behavior.

To ensure analytical accuracy, the courts choosing to apply perilous leading to output decisions should consider additional factors, such as demand conditions, historical context, non-conspiratorial reasons, and mechanisms to discipline cheating. Either way, companies face limited risk of antitrust liability under a perilous-leading theory so long as the decision is in the company's self-interest, aligns the company's production with its forecasted demand, and is not out of line with the company's historical decisions. ■

1 Kleen Prods. LLC v. Georgia-Pacific LLC, 910 F.3d 927, 931 (7th Cir. 2018).

2 *Id.* at 931–32.

3 Smurfit-Stone (which WestRock acquired in May 2011) had received a discharge in bankruptcy in June 2010. Therefore, WestRock was free from liability incurred prior to that point, although it could have been liable for a violation of the antitrust laws had there been evidence that it rejoined the cartel following the bankruptcy discharge. *Id.* at 939–40.

4 Kleen Prods. LLC v. Int'l Paper, 276 F. Supp. 3d 811, 824–27 (N.D. Ill. 2017).

5 *Id.* at 828.

6 *Kleen Products*, 910 F.3d at 936.

7 *Id.* at 937, 939–41 (citing Phillip E. Areeda & Herbert Hovenkamp, Antitrust Law ¶ 1425d (4th ed. 2018).

8 *Id.* at 938.

9 *Id.*

10 *See id.* at 931, 938 ("Far from perilous, had Georgia-Pacific's efforts not paid off, it could have increased its output quickly.").

11 Areeda & Hovenkamp, *supra* note 7, ¶ 1425d.

12 *Id.* ¶ 1425d3.

13 906 F.2d 432, 436 (9th Cir. 1990).

14 *Id.* at 463 (emphasis added); the court also considered evidence that the oil companies had managed supply of petroleum products in the Middle East. *See id.* at 463–64.

15 *Id.* at 462–63, 465.

16 *Id.* at 460.

17 764 F. Supp. 2d 991 (N.D. Ill. 2011).

18 *Id.* at 996.

19 *Id.* at 1001.

20 *Id.* at 1002 (citing Areeda & Hovenkamp, *supra* note 7, ¶ 1425d; *Petroleum Products*, 906 F.2d 432, 463 (9th Cir. 1990)).

21 Std. Iron Works v. ArcelorMittal, 639 F. Supp. 2d 877, 879 (N.D. Ill. 2009) (citing Clamp-All Corp. v. Cast Iron Soil Pipe Inst., 851 F.2d 478, 484 (1st Cir. 1998)).

22 *In re* Chocolate Confectionary Antitrust Litig., 999 F. Supp. 2d 777, 788–89 (M.D. Pa. 2014) (citing *In re* Flat Glass Antitrust Litig., 385 F.3d 350, 360 (3d Cir. 2004)).

23 *Petroleum Products*, 656 F. Supp. 1296, 1307 (C.D. Cal. 1986).

24 *Petroleum Products*, 906 F.2d at 463.

25 Competitive Impact Statement at 6–7, United States v. International Paper Co. and Temple-Inland Inc., 1:12-cv-00227 (D.D.C. Feb. 10, 2012), http://www.justice.gov/atr/cases/f280100/280135.pdf at 6–7. For a description of the DOJ capacity closure model, see Nicholas Hill, *Analyzing Mergers Using Capacity Closures* (EAG Discussion Paper. Aug. 2008), http://www.justice.gov/atr/public/eag/236664.pdf.

26 Matsushita Elec. Indus. Co. v. Zenith Radio Corp., 475 U.S. 574 (noting that "[m]istaken inferences in cases such as this one are especially costly, because they chill the very conduct that antitrust laws are designed to protect.").

27 U.S. Dep't of Justice & Fed. Trade Comm'n, Horizontal Merger Guidelines n.19 (1992, rev. 1997).

28 Areeda & Hovenkamp, *supra* note 7, ¶ 1425d.

29 *See Kleen Products*, 910 F.3d at 932, 938.

30 Theatre Enters., Inc. v. Paramount Film Distrib. Corp., 346 U.S. 537, 540 (1954).

31 *Kleen Products*, 910 F.3d at 935 (citing *In re* Chocolate Confectionary Antitrust Litig., 801 F.3d 383, 397 (3d Cir. 2015), and *In re* Text Messaging Antitrust Litig., 782 F.3d at 871–72 (7th Cir. 2015)).

32 Bell Atl. v. Twombly, 550 U.S. 554, 556 n.4 (2007).

33 *See, e.g.*, *In re* Text Messaging Antitrust Litig., 630 F.3d 622, 628 (7th Cir. 2010) (affirming decision to permit filing of amended complaint where plaintiffs had alleged defendants suddenly changed pricing structure and raised prices by a third); *In re* Graphics Processing Units Antitrust Litig., 540 F. Supp. 2d 1085, 1096 (N.D. Cal. 2007).

34 639 F. Supp. 2d 877, 900 (N.D. Ill. 2009).

35 *See Kleen Products*, 276 F. Supp. 3d at 938.

36 *Petroleum Products*, 656 F. Supp. at 1308–09.

37 *Id.* at 1308.

38 *In re* Baby Food Antitrust Litig., 166 F.3d 112, 137 (3d Cir. 1999) (without a mechanism to detect cheating among co-conspirators, "no conspiracy, if it existed, could long endure"); Blomkest Fertilizer, Inc. v. Potash Corp. of Sask., 203 F.3d 1028, 1043 (8th Cir. 2000) (stating that "a cartel can only succeed for any period of time if it has the ability to detect cheating and punish it effectively"); George J. Stigler, *A Theory of Oligopoly*, 72 J. Pol. Econ. 44 (1964).