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ANTITRUST ECONOMICS FOR PROOF OF CONCERTED
PRICE-FIXING: PRACTICAL POINTS FOR U.S. AND KOREAN
ANTITRUST JURISPRUDENCE

*Chang-Su Choe**

Abstract

This Article addresses the U.S. antitrust approach to drawing inferences of concerted or independent conduct from the evidence of parallel pricing to provide suggestions to antitrust practice. It goes through the central issues that demand economic analysis and employs economic reasoning to set up a useful analytical framework for proof of price-fixing. It gives particular focus to the market structural features that allow for collusive price-fixing, and reviews the way that U.S. and Korean antitrust authorities have handled the so-called “plus factors.” This Article argues that it is necessary to search for better analytical methods to effectively distinguish independent from concerted conduct. It concludes that, to make reasonable and predictable economic analysis of the proffered evidence, a more sophisticated analytical framework must be properly delineated and developed on a case-by-case basis.

I. INTRODUCTION

Adam Smith has led our modern economy to believe in the market’s “invisible hands.”¹ But he also cautioned that “people of the same trade seldom meet together, even for merriment and diversion, but the conversation ends in a conspiracy against the public, or in some contrivance to raise prices.”² This conflict between faith and fear created the need for antitrust law.

On the one hand, antitrust law intends to encourage—or at least to not undermine—competitors’ vigorous incentives to increase the prices of their goods or services in the marketplace.³ We trust that competition, as incentivized, will transfer to consumers goods and services that are

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¹ ADAM SMITH, AN INQUIRY INTO THE NATURE AND CAUSES OF THE WEALTH OF NATIONS (R.H. Campbell et al. eds., Oxford: Clarendon Press 1976) (1776).

² *Id.* at 80.

³ See generally GEORGE STIGLER, THE THEORY OF PRICE (3d ed. 1966) (applying microeconomic theory to describe how prices are determined).

lower priced and of better quality. On the other hand, since competitors' concerted price-fixing is generally achieved by restricting output, it results in a socially undesirable misallocation of scarce resources.⁴ Antitrust law exists to build up a hurdle of distrust among competitors to deter them from fixing prices by employing relevant corrective measures.

Direct evidence of collusive price fixing is hard to detect. Competitors will not unwittingly leave behind the kind of evidence that will enable an antitrust agency to initiate an investigation and later prevail at trial.⁵ In this regard, the absence of evidence, other than parallel price fixing, should not simply count as a reason for believing that the competitors are abiding by antitrust laws. Accordingly, we should not rule out the possibility of collusive price fixing.

This Article addresses the following question: How have Korean and U.S. antitrust authorities developed economic bases from which inferences from circumstantial evidence of parallel pricing can be drawn? Part II discusses how market structure can imply price fixing but is insufficient to conclusively prove conspiracy. Part III examines relevant theories of market phenomena as price fixing determinants and proposes a hierarchy for weighing that market evidence. Part IV probes how the judiciary has applied the price leadership theory, and how the judiciary's understanding of this theory will affect future cases. This Article establishes a framework for antitrust analysis by identifying and analyzing relevant economic bases of Korean and U.S. antitrust laws that impose price fixing liability even if direct evidence is lacking. Therefore, this Article fleshes out the central economic issues that call for analysis of a relevant market's structural features and wide-ranging market phenomena that may lead to collusive price fixing. In this regard, the Article also explores helpful similarities and differences between some aspects of European Union and Japanese antitrust law. The ultimate purpose of this Article is to construct a guideline for drawing adequate boundaries of circumstantial evidence and to lay out the analytical steps in the process of inferring price fixing by virtue of additional evidence.⁶

⁴ See W. KIP VISCUSI ET AL., *ECONOMICS OF REGULATION AND ANTITRUST*, ch. 5 (3d ed. 2000).

⁵ Cf. Peter G. Bryant & E. Woodrow Eckard Jr., *Price Fixing: The Probability of Getting Caught*, 73 *REV. OF ECON. & STATISTICS* 531, 531 (1991) (proposing a model for estimating the probability of catching price-fixing conspiracies and estimating the number of such schemes active at any given time).

⁶ See Jerome A. Hochberg, *Law and Enforceability: A Litigator's Perspective*, in *REVITALIZING ANTITRUST IN ITS SECOND CENTURY: ESSAYS ON LEGAL, ECONOMIC, AND POLITICAL POLICY* 161–68 (Harry First et al., eds., 1991) (arguing that “[s]ome of the nation’s economic and legal talent should take some time off from opining about economic issues and enlarging our fund of knowledge... and, instead, devote their considerable skill and energy to trying

The Article argues that it is necessary to construct better analytical methods to effectively distinguish between independent and concerted conduct. It concludes that, to make economic analysis of the proffered evidence reasonable and predictable, a more sophisticated analytical framework must be properly delineated and developed on a case-by-case basis.

II. INITIAL ECONOMIC BASIS: MARKET STRUCTURE AS DETERMINANT OF PRICE-FIXING

A. An Opening Sketch

Professor Hovenkamp posed the following hypothetical in an article to show the difficulty in discovering oligopoly price coordination:

[If] four gasoline stations on an intersection invariably wait for A to post its price every Monday morning, and then all of them precisely match it, an observer might say that the convention has become the equivalent of a verbal agreement. Further, B, C, and D all know that if they post a higher price they will make no sales; if they post a lower price it will be immediately matched or undercut.⁷

This simple example unfolds not only one of the most recurring questions that demands antitrust consideration in theory, but also one of the most frequently arising issues in antitrust practice. Since parallel pricing is easily observable and ubiquitous in the marketplace, we might be led to assert that interdependent pricing should not be under the purview of antitrust as a matter of law. From the antitrust perspective, however, it “purports neither to describe any particular real market nor to predict the competitiveness of a market with few firms or of oligopoly markets generally.”⁸ In collusion cases, the plaintiff’s viable claim can always be predicated on more evidence; otherwise, the plaintiff would not have brought the action in the first place.⁹

to generate data and develop simple rules and presumptions to resolve the great majority of cases, be they mergers or restraints or other conduct under the Sherman Act”).

⁷ Herbert Hovenkamp, *Book Review: The Rationalization of Antitrust*, 116 HARV. L. REV 917, 922–23 (2003).

⁸ PHILLIP E. AREEDA & HERBERT J. HOVENKAMP, *ANTITRUST LAW: AN ANALYSIS OF ANTITRUST PRINCIPLES AND THEIR APPLICATION* para. 1434(d)(2) (2d ed. 2000).

⁹ See HERBERT HOVENKAMP, *THE ANTITRUST ENTERPRISE* 134–36 (2008).

In a factually similar case to the above hypothetical, one U.S. court did not accept the plaintiff's argument that the united facts established that the defendant gasoline retailer was colluding with its competitors.¹⁰ The gasoline retailer consciously implemented parallel pricing, posted its prices on large signs, and surveyed competitor prices. Instead, stronger evidence effectively undermined the existence of conspiracy. During that market period, the retail gasoline business was competitive because there were at least sixty retail gasoline outlets, the defendant's several competitors filed complaints of the defendant's low gasoline prices, and the defendant had a declared policy of pricing at or near the lowest price on the market.¹¹

The court found that the plaintiff failed to meet its burden of establishing that the defendant retailer participated in a conspiracy to raise or fix gasoline prices. The court agreed with the defendant's argument that:

[I]t is not unlawful for a business enterprise to take prices charged by its competitors into account when setting its own prices or to follow or copy prices of competitors so long as the decision to do so is the result of unilateral business judgment and not the result of collusive agreement.¹²

This Article will discuss, in greater depth, the complications and implications of the court's reasoning as a matter of antitrust economics.

Antitrust law takes forward and backward analytical steps to explore the nature of competition in a particular industry. As noted above, the mere absence of direct evidence in competitors' parallel pricing does not necessarily indicate that price fixing is not occurring. For that reason, antitrust law steps forward to examine the industry's structural indicia that can suggest sufficiently interdependent features of competitors, thus predicting the plausibility of collusive price fixing. On the other hand, the inherently interdependent nature of oligopoly markets can lead to competitors' parallel pricing even in the absence of an illegal agreement among competitors. Accordingly, antitrust law steps back and asks for further evidence to ensure that the arguably supracompetitive prices were not from competitors' interdependence but from their concerted conduct.

With that observation, this Article first delves into market structural

¹⁰ *Montana v. SuperAmerica*, 559 F.Supp. 298, 303 (D.Mont. 1983).

¹¹ *Id.* at 300.

¹² *Id.* at 301-02.

factors that meet the notion of interdependence and looks into their implications. Part III then examines what further evidence is required from methodological perspectives by comparing the U.S. and Korean antitrust jurisprudence.

B. Market Structural Traits that Show Interdependence

Practitioners of both Korean and U.S. antitrust jurisprudence have been searching for more specific objective tests that can show that the parallel pricing in question is conspiratorial in its nature and extent. To that end, antitrust law has relied upon economic interpretations of evidence.¹³ In general, economic theory posits that, in a competitive market, there are many market players whose individual market shares are not significant, and that one player's pricing decisions have a negligible impact on other market players or on the industry.¹⁴ Knowing their inconsequential influence on the market, players in that competitive market will independently decide to increase prices of their products or services without taking a careful look at, and aptly reacting to, what other competing market players are doing and will do.¹⁵

As we frequently witness, however, oligopolies dominate most of the real-world markets.¹⁶ In an oligopoly, only a few leading market players control the market. In such a market, the relevant players should interact with each other because a profit to one player, by selling one more product, may necessarily mean a loss to one or more other players. Whether a player has succeeded in the market is thus likely to be measured by a relative evaluation method as opposed to an absolute one. In an industry that has relatively few competing players, the actions and reactions of each player have significant impact on the conduct of competitors, and eventually on the general market price.¹⁷

In short, in the hypothetical competitive market, each market player may be ignorant of or indifferent to other players' conduct. However, in

¹³ See F.M. SCHERER & DAVID ROSS, *INDUSTRIAL MARKET STRUCTURE AND ECONOMIC PERFORMANCE* 97 (3d ed. 1990); see also DENNIS W. CARLTON & JEFFREY M. PERLOFF, *MODERN INDUSTRIAL ORGANIZATION* ch. 5 (4th ed. 2005) (discussing the economics of a cartel market structure).

¹⁴ See GREGORY MANKIW, *PRINCIPLES OF ECONOMICS* 345 (5th ed. 1998).

¹⁵ See SUN-SIK JU, *DUKGOAJUM YI GYU-JE* (주순식, 독과점의 규제) [REGULATION OF MONOPOLY AND OLIGOPOLY MARKETS], PART 1, ch. 2, in JAYU KYUNGJANG GUA GONGJUNG GURAE (자유무역과 공정거래) [FREE COMPETITION AND FAIR TRADE] (Oh-Seung Kwan ed., 2003).

¹⁶ AREEDA & HOVENKAMP, *supra* note 8, ¶ 404(a).

¹⁷ See *id.* ¶ 1429.

an oligopoly market, each player may take into account what other players are considering to determine relevant pricing bases for their products or services.¹⁸ In the latter case, the market players' conduct, known as economic interdependence, is the very motivating factor that drives competitors into making pricing decisions in a mutually dependent fashion.¹⁹ Therefore, antitrust law requires a showing of interdependence among competitors as an initial step of inferring unlawful price fixing from parallel pricing.²⁰

The pertinent inquiry in this initial step is determining under what basis and to what extent interdependence can be established. Antitrust jurisprudence has developed an analytical way of deriving interdependence from a number of market factors that could sufficiently portend the analogous circumstances where collusive price fixing occurred. It is the economic theory and empirical evidence that permit us to predict or assume the plausibility of price-fixing in a particular market.²¹ Hence, economic analysis of the structural features seeks to discover interdependence.²²

As shown by Table 1 below, antitrust economics asks various questions to identify the pertinent structural characteristics in determining the nature of competition in a particular industry.²³ Relevant structural factors may be divided into two parts to better understand their operations.²⁴ One part is composed of factors that contribute to the competitive significance of concentration magnitude,²⁵ and the other is

¹⁸ For an observation of interdependence in terms of cost advantage and product differentiation, see MICHAEL E. PORTER, *COMPETITIVE ADVANTAGE: CREATING AND SUSTAINING SUPERIOR PERFORMANCE*, ch. 3–4 (The Free Press, 1985); see also Dennis A. Yao & Susan S. DeSanti, *Game Theory and the Legal Analysis of Tacit Collusion*, 38 ANTITRUST BULL. 113 (1993) (discussing tacit collusion).

¹⁹ See SCHERER & ROSS, *supra* note 13, ch. 6; see also AREEDA & HOVENKAMP, *supra* note 8, para. 1411 (explaining that no conspiracy inference may be made from parallelism where there is no interdependence in the market).

²⁰ See LAWRENCE ANTHONY SULLIVAN, *HANDBOOK OF THE LAW OF ANTITRUST* 163–65 (1977).

²¹ See George Stigler, *A Theory of Oligopoly*, 72 J. POL. ECON. 44–61 (Feb. 1964).

²² See AREEDA & HOVENKAMP, *supra* note 8, ¶ 1409; see also *Barry v. Blue Cross of Cal.*, 805 F.2d 866, 869 (9th Cir. 1986) (“The most precise test for economic interdependence involves an economic analysis of an industry's market structure.”).

²³ See JOHN E. KWOKA, JR. & LAWRENCE J. WHITE, *THE ANTITRUST REVOLUTION: ECONOMICS, COMPETITION, AND POLICY* 172–80 (4th ed. 2004); see also MICHAEL E. PORTER, *COMPETITIVE STRATEGY: TECHNIQUES FOR ANALYZING INDUSTRIES AND COMPETITORS* 3–33, 191–200 (1980) (explaining that market structure plays a critical role in the analysis of the amount of competition in an industry).

²⁴ See AREEDA & HOVENKAMP, *supra* note 8, ¶1430.

²⁵ For examination of further factors that may impede or facilitate collusion, see SCHERER AND ROSS, *supra* note 13, ch. 7 & 8; see also AREEDA & HOVENKAMP, *supra* note 8, ¶¶ 1430, 1434(d)(3) (discussing factors affecting likelihood of oligopolistic coordination and proving conspiracy using plus factors to prove conspiracy).

the variables on which competitors may rely for coordinating their price increases.²⁶

TABLE 1. Market Structural Features Conducive to Collusion

Factors	It is more economically plausible to assume price-fixing if each of the following is true:
Degree of Concentration	<ol style="list-style-type: none"> 1. The number of sellers is fewer; 2. Firms' sizes are smaller; 3. Buyers are smaller and more numerous; 4. Entry is difficult;²⁷
Degree of Variables	<ol style="list-style-type: none"> 5. Firms' costs are similar;²⁸ 6. Product homogeneity is great;²⁹ 7. Orders are small and frequent; 8. Information about rivals' prices is readily available;³⁰ 9. Demand is stable;³¹ and 10. Fixed costs are low.

Out of this initial analysis, antitrust tribunals generally intend not only to determine whether the features of highly concentrated markets are conducive to collusion, but also to safely single out a market that may not possess the basic features. On the latter occasion, antitrust tribunals are likely to find that collusive conduct in that market is implausible. A typical parallel pricing case shows that different fact patterns engage

²⁶ See *Brooke Grp. Ltd., v. Brown & Williamson Tobacco Corp.*, 509 U.S. 209, 238 (1993) (finding that “[t]acit coordination is facilitated by a stable market environment, fungible products, and a small number of variables upon which the firms seeking to coordinate their pricing may focus”). For example, if products are sold primarily based on price, coordinating prices would be easy. For an understanding of dynamic strategies, see PORTER, *supra* note 23, ch. 5.

²⁷ If barriers to entry are high enough, concerted price-fixing will be generally unprofitable, and thus unlikely.

²⁸ If there is either declining demand or excess production capacity, market players normally favor price cuts as opposed to price increases.

²⁹ The products are homogeneous or fungible in that each is identical with its counterpart in a particular feature. The more homogeneous the products, the easier it is to agree on prices. In industries such as commodities, prices tend to be uniform. RICHARD A. POSNER & FRANK H. EASTERBROOK, *ANTITRUST: CASES, ECONOMIC NOTES AND OTHER MATERIALS* 337 (2d ed. 1981).

³⁰ For an understanding of dynamic strategies, see PORTER, *supra* note 23, ch. 5.

³¹ Demand is said to be price-inelastic in economics where one product is so dissimilar to others that a substantial increase of its price does not result in an immediate shift to the other products by consumers. Assuming other things are equal, a lower price elasticity of demand for the leading firms' products creates more incentives to engage in collusion. E. THOMAS SULLIVAN & HERBERT HOVENKAMP, *ANTITRUST LAW, POLICY AND PROCEDURE: CASES, MATERIALS, PROBLEMS* 49–53 (3d ed. 1994).

dissimilar working modes of the factors in antitrust practice.

The above factors have been subject to different court interpretations depending upon the facts of the case at hand, which may considerably affect the outcome of cases. Therefore, the above general interpretations must be tentative at this point. The structural factors in an overall analytical framework have a couple of functions: 1) they initially suggest some signs of collusive price-fixing; and 2) they subsequently show circumstances that may facilitate or impede collusive conduct so as to support or undermine the existence of price fixing. Of legal significance is the fact that the arguably supracompetitive prices might result from simple interdependence among competitors without any agreement.

Indeed, both Korean and U.S. courts have consistently found that consciously parallel conduct alone is not enough to establish unlawful collusion. In short, a showing of interdependence can let us *presumptively but inconclusively* make the inference of price fixing before conducting further analysis. Therefore, the interdependence that the market structural features suggest should stop short of telling us that competitors are acting conspiratorially. In a litigation setting, if the signs of collusive price fixing based on the market structures are found to be economically implausible, that might undermine a price fixing claim requiring a plaintiff to bear the higher burden of coming up with strong or convincing additional evidence; otherwise, a relatively lower burden of proof is conventionally required.³²

III. SUBSEQUENT ECONOMIC BASIS: MARKET PHENOMENA AS DETERMINANT OF PRICE-FIXING

This section examines relevant economic bases of market players' conduct or performance that may strengthen or weaken the existence of price fixing. In particular, it analyzes the methodology of Professor Phillip Areeda's treatise as a model of arguments to understand the way in which U.S. antitrust jurisprudence has identified and classified the required circumstantial evidence.³³ Following that analysis is relevant additional evidence that Korean antitrust authorities have recently found. It concludes with a criticism of Professor Areeda's methodology in terms

³² See ABA SECTION OF ANTITRUST LAW, ANTITRUST LAW DEVELOPMENTS 7 (5th ed. 2002).

³³ This Study turns to this multivolume treatise because it is the principal compendium that deals with circumstantial evidence and is most frequently cited as secondary authority by U.S. courts. See AREEDA & HOVENKAMP, *supra*, note 8.

of the relevance and significance of each factor. Then, it addresses a desirable hierarchy for weighing the overall additional evidence.

A. Identification of Additional Evidence

Antitrust jurisprudence has required so-called “plus factors” to test whether other factors combined with the market structural features can sufficiently establish the existence of collusion.³⁴ Professor Areeda is reluctant to use the term “plus factors” because it is an “inelegant” term meaning “the additional facts or factors required to be proved as a prerequisite to finding that parallel action amounts to a conspiracy.”³⁵

The U.S. Ninth Circuit Court of Appeals first used the technical term “plus factors” in a 1952 conspiracy case. The court sustained the criminal convictions of the defendant and found that:³⁶

[A] series of ‘plus factors’ which, when standing alone and examined separately, could not be said to point directly to the conclusion that the charges of the indictment were true beyond a reasonable doubt, but which, when viewed as a whole, in their proper setting, spelled out that irresistible conclusion.³⁷

Although the U.S. Supreme Court has never used the term “plus factors” in conscious parallelism cases, virtually all of the lower U.S. courts have employed it as a term of art.³⁸

In his treatise on antitrust law, Professor Areeda suggests detailed additional evidence to distinguish mere interdependent pricing from collusive price fixing.³⁹ It is difficult to review his methodology in full because his discussion of circumstantial evidence is too comprehensive in scope and is filled with numerous cases and examples. It is also unclear whether the following factors are meant to constitute all conceivable additional evidence. At the risk of oversimplification, however, this Article identifies and classifies four general categories of price fixing evidence as follows:⁴⁰

³⁴ See, e.g., Supreme Court [S. Ct.], 2000Du1386, May 28, 2002 (S. Kor.).

³⁵ AREEDA & HOVENKAMP, *supra* note 8, para. 240.

³⁶ C-O-Two Fire Equip. Co. v. United States, 197 F.2d 489, 493, 497 (9th Cir. 1952).

³⁷ *Id.* at 493.

³⁸ See Theatre Enters., Inc. v. Paramount Film Distrib. Corp., 346 U.S. 537, 541 (1954).

³⁹ AREEDA & HOVENKAMP, *supra* note 8, ch. 14.

⁴⁰ See *id.* ¶¶ 1434(a)–(e); see also HERBERT HOVENKAMP, FEDERAL ANTITRUST POLICY: THE LAW OF COMPETITION AND ITS PRACTICE 177–78 (2d ed. 1999) (discussing signs of collusion).

- (1) Interdependence Evidence;
 - Motive for Agreement
 - Benefit from Agreement
 - No Independent Reason for Challenged Behavior
 - Acting Against Self-interest
- (2) Evidence Found Under Traditional Conspiracy;
 - Opportunity to Collude
 - Motive to Desire Action in Concert
 - An Overt Act Consistent with Concerted Action
- (3) Evidence of Poor Economic Performance; and
- (4) Evidence of Facilitating Practices.

In characterizing circumstantial evidence, Professor Areeda observes that the evidence falling under Categories 1 and 2 is *additional evidence* as opposed to plus factors.⁴¹ He recognizes, however, that some courts regard conspiratorial motive and Acts Against Self-interest under Category 1 (Interdependence Evidence) as plus factors.⁴² With respect to Category 1, he argues that “[t]he presence of interdependence means that there would be a motive for conspiracy, that an agreement would benefit the alleged conspirators, and that an act could offend the actor’s self-interest unless his rivals act similarly.”⁴³ The Acting Against Self-interest argument is generally made for the proposition that the alleged agreement is contrary to the interests of individual parties unless carried out together with other conspirators. The No Independent Reason for Challenged Behavior category is used as a counter-argument against the contention that relevant parties were acting against their self-interests.⁴⁴

As for the Category 2 (Evidence Found Under Traditional Conspiracy), Professor Areeda finds that, in cases involving parallel conduct, the plaintiff is required to prove the following three factors: “[1] some easily shown opportunity to arrange the common action, [2] some

⁴¹ See HOVENKAMP, *supra* note 40, at 177–78; AREEDA & HOVENKAMP, *supra* note 8, ¶¶ 1411, 1416 (With respect to relevant plus factors, the U.S. Supreme Court identified the two inquires: (1) whether the defendant has “any rational motive” to join the alleged conspiracy; and (2) whether the defendant’s conduct “was consistent with the defendant’s independent interest.”); *see also* Matsushita Elec. Indus. Co. v. Zenith Radio Corp., 475 U.S. 574, 587, 596–97 (1986) (holding that “if [the defendants] had no rational economic motive to conspire, and if their conduct is consistent with other, equally plausible explanations, the conduct does not give rise to an inference of conspiracy”).

⁴² See AREEDA & HOVENKAMP, *supra* note 8, ¶. 1434(a); William E. Kovacic, *The Identification and Proof of Horizontal Agreements under the Antitrust Laws*, THE ANTITRUST BULL., 31–57 (Spring 1993).

⁴³ AREEDA & HOVENKAMP, *supra* note 8, ¶. 1411.

⁴⁴ See Kovacic, *supra* note 42, at 39.

motive for the defendants to desire action in concert, and [3] an overt act more consistent with some pre-arrangement for common action than with independently arrived-at decisions.”⁴⁵ Without explicitly stating that oligopolistic market features are additional evidence, he characterizes them as “factors affecting likelihood of oligopolistic coordination” and places them under Category 3 (Evidence of Poor Economic Performance).⁴⁶

Professor Areeda only considers Categories 3 (Evidence of Poor Economic Performance) and 4 (Evidence of Facilitating Practices) as plus factors. To the extent that evidence under all four categories has a tendency to support or weaken the existence of price fixing, Professor Areeda seems willing to characterize it as additional evidence as generally understood. It may not matter, therefore, whether some evidence is specified as plus factors while other evidence is not.

Korean antitrust jurisprudence finds the existence of plus factors as well. As it became necessary to handle the increased collusion cases properly, the Korea Fair Trade Commission (KFTC) set forth the “Reviewing Criteria for Concerted Conduct,” which lists four types of additional evidence and their corresponding examples:

- (1) Where there is evidence of direct/indirect communications or exchange of information;
- (2) Where the price increases could contribute to the enterprises’ interests only if performed by concerted conduct and they could be against individual enterprise’s interests if individually performed;
- (3) Where the coincidence of the conduct is not justified in terms of legitimate business purposes; and
- (4) Where it is difficult to achieve concerted conduct absent some sort of agreement given the current industry structure.⁴⁷

⁴⁵ AREEDA & HOVENKAMP, *supra* note 8, ¶ 1416.

⁴⁶ *Id.* ¶¶ 1430, 1434(d)(3).

⁴⁷ See KOREA FAIR TRADE COMMISSION, REVIEWING CRITERIA FOR CONCERTED CONDUCT, 1–3 (Aug. 21, 2009); see also THE U.S. DEP’T OF JUSTICE & FEDERAL TRADE COMM’N, ANTITRUST GUIDELINES FOR COLLABORATIONS AMONG COMPETITORS (2000), available at <http://www.ftc.gov/os/2000/04/ftcdojguidelines.pdf> (discussing U.S. standards for evaluating agreements among competitors).

In practice, the KFTC has found that, to infer concerted action from conscious parallelism, the following plus factors should be considered as a whole in addition to the parallel price increases of products. Authorities should consider whether:

- A rational motive or reason exists for concerted action;
- A firm is acting against its self-interest unless the action is performed with other conspirators;
- Market situations exist that cannot be explained by ways other than concerted action;
- A firm has past violations of antitrust law;
- Direct communication such as meetings is present among alleged conspirators;
- There has been a mutual exchange of information;
- Data has been exchanged through trade association meetings;
- A common or similar price calculation formula has been adopted among oligopolists; and
- Industrial structure can make collusion easier.⁴⁸

Until recently, the Korean Supreme Court had not held what evidence could come under the plus factors.⁴⁹ However, in 2003, the Court held that in weighing the circumstances that can rebut the presumed concerted action, a court should reasonably consider the additional evidence as a whole according to the general norms of business transactions.⁵⁰ The Court listed plus factors that are broader in scope than what the KFTC had found above. They include:

- The characteristics and current situations in a relevant product market;

⁴⁸ See *Ju Posteel Yi Budanghan Gongdonghangwi Mit Gwajinggeum Jaesanjeongye Daehan Geon* ((주)포스틸의 부당한 공동행위 및 과징금 재산정에 대한 건) [*In re Collusion and Fine Recalculation of POSCO Steel Service & Sales Co., Ltd.*], (2001 독점 1934) [2001DokJum1934], Korea Fair Trade Comm'n, Decision 2001-126, (Sept. 10, 2001) (S. Kor.).

⁴⁹ See SOO-IL SON, GONGDONG HANGWI(CARETEL) YI GYUJEI WA CHOOJEONG JOHANG YI MOONJEJEOM KYUNGJABYUP YI JEMUNJE, BYUPWON DOSEOKWAN (손수일, 공동행위(카르텔)의 규제와 추정조항의 문제점) [REGULATION OF CONCERTED ACTION (CARTELS) AND PROBLEMS OF THE PRESUMPTION CLAUSE], ch. 5, *in* *Kyungjaebyup Yi Jeimoonjei, Byupwon Doseokwan* (경제법의 체문제, 법원도서관) [THE PROBLEMS OF ECONOMIC LAWS, the Court Library] (Case Information No. 87, 2000); see also CHAN-MOO HUR, *Kongjong Korae Byup Kwa Cartel Kyujae* (공정거래법과 카르텔규제) [ANTITRUST LAW AND CARTEL REGULATION] (2000).

⁵⁰ See Supreme Court [S. Ct.], 2001Du5552, Dec. 12, 2003 (S. Kor.); see also Supreme Court [S. Ct.], 2002Du4648, May 27, 2003 (S. Kor.).

- The nature and type of products involved;
- Distribution networks in the marketplace;
- The structure of price determinants;
- Various internal and external effects on market price;
- The positions that each firm holds in the field;
- Each firm's profits as a result of price changes;
- The effects on relative market shares;
- The legitimacy of business judgment in view of individual firms' business conditions;
- The actual conditions for direct exchange of ideas (for example, meetings among firms);
- The degree of probability that coincidence could result even in the absence of discussion;
- The experience of price imitation and past violations; and
- The economic policy background.⁵¹

Although different fact patterns require differing plus factors, the review of plus factors in U.S. and Korean antitrust jurisprudence suggests that the factors are not substantially different and have many common elements, such as Acting Against Self-interest or Opportunities to Coordinate Prices. However, this Article could not find any viable discussion as to the relevance and significance of each factor and an applicable hierarchy in to weigh them.⁵² Korean antitrust law includes almost the full range of imaginable circumstances. If the listed plus factors are intended to build an extensive framework, that is well and good, but simply listing plus factors is of no help in analyzing complicated facts to the extent that antitrust tribunals are forced to rely on the relative value and weight of the factors in deciding cases.

B. Evaluation of the Categories and Types

The relevance and significance of each plus factor should be based, in large part, upon each factor's power of persuasion or explanation. We will be able to us to assess the proffered factors against one another by doing so, and offer reasonable hierarchical orders among them.⁵³

⁵¹ Supreme Court [S. Ct.], 2001Du5552, Dec. 12, 2003 (S. Kor.).

⁵² See Michael K. Vaska, *Conscious Parallelism and Price-fixing: Defining the Boundary*, 52 U. CHI. L. REV. 508 (1985).

⁵³ See Hovenkamp, *supra* note 7, at 924–25.

Professor Areeda has entered so many factors into the categories presumably because the relevant part of his treatise is designed to cover inferential proof of collusion from *all* concerted conduct as well as parallel pricing. But different collusive behaviors (such as bid-rigging, market allocation, or group boycott) require different methodological formulations for adequate analysis. For the purposes of this Article, the evaluation is conducted in the context of parallel pricing only.

1. Evidence to Show Interdependence

Professor Areeda's model has four factors that show competitors' interdependence: (1) Motive for Agreement, (2) Benefit from Agreement, (3) No Independent Reason for Challenged Behavior, and (4) Acting Against Self-interest.⁵⁴ He seems to argue that market structural features alone are not enough to show interdependence. In addition to the features, one or more of the four factors must be established to show interdependence. As far as the four factors are concerned, Professor Areeda's methodology appears different from that of most antitrust tribunals and scholars because he quite broadly construes the notion of interdependence.

First, he notes that some consider Factors 1 and 2 to be the same. The reason that competitors wish to enter into agreements is apparently to obtain certain profits by virtue of concerted action.⁵⁵ Professor Areeda also places the Factor 3 (No Independent Reason for Challenged Behavior) into Category 1 (Interdependence Evidence).⁵⁶ However, the element should not be considered a separate plus factor because in practice, presence or absence of independent, legitimate business justifications almost always serves as a defense to every single plus factor that underlies a plaintiff's argument.⁵⁷ It may be better to designate the factor as one distinct category of defenses or counter-arguments. Accordingly, the four factors under Category 1 could be narrowed down to two factors: a Motive to Collude and Acting Against One's Self-interest.

To evaluate the relevance and significance of the two elements, we may need to go to the fundamental underpinnings of economics. To

⁵⁴ AREEDA & HOVENKAMP, *supra* note 8, ¶¶ 1434(a)–(e)

⁵⁵ *See id.* ¶1434(c)(1).

⁵⁶ *Id.* ¶¶ 1434(a)–(e).

⁵⁷ *See* Kovacic, *supra* note 42, at 55–57; *see also* Emil John Kotalik, Jr., *Conscious Parallelism: The Business Judgment Defense in a Summary Judgment Context*, 35 HASTINGS L.J. 115 (1983) (discussing the business judgment defense in conscious parallelism cases).

someone untrained in economics, this subject may seem to be one of complex statistics, numbers, tables, and charts. As a social science, however, economics is the study of what constitutes rational human behaviors in an endeavor to fulfill one's needs and wants. For that purpose, economics makes two related assumptions—market players will aim to fulfill their self-interests, and individual players are rational in their efforts to achieve their unlimited needs and wants.⁵⁸

These economic assumptions allow us to appreciate each alleged conspirator's motive to participate in concerted plans with competitors to increase prices in an oligopolistic market.⁵⁹ As discussed below, Factor 4 (Acting Against Self-interest) can also perform the same function as that of Factor 1 (Motive for Agreement).⁶⁰ The element of Motive to Collude may thus “count for little or nothing.”⁶¹

As for Factor 4, Professor Areeda notes that this factor has the “screening function” of checking for the existence of interdependence.⁶² He does not, however, give this factor priority over other factors in the hierarchy. It is somewhat curious that although many courts and commentators are willing to consider this as a plus factor, few give definite explanations as to why it is relevant and significant.

Factor 4 should be the very first factor to be tested because it has important legal significance.⁶³ It may be self-evident that any statement or conduct against one's self-interest is trustworthy. Rather than putting that observation in an analytical framework, it would be better to explicitly premise the reason upon *economic* theory. The issue is whether a firm is acting against its unilateral self-interest since its price increases would only make sense as part of a concerted scheme. If the answer is yes, it completely challenges the economic assumption upon which antitrust law is firmly built, and it provides evidence that the alleged conspirators are agreeing to anti-competitive behavior. Because a

⁵⁸ See EDWIN MANSFIELD, *MICROECONOMICS: THEORY AND APPLICATIONS* (1994).

⁵⁹ See AREEDA & HOVENKAMP, *supra* note 8, para. 1431(c)(1); see also Jonathan B. Baker, *Two Sherman Act Section 1 Dilemmas: Parallel Pricing, the Oligopoly Problem, and Contemporary Economic Theory*, 38 ANTITRUST BULL. 143, 143–219, n.60 (1993) (“[W]hy, after all, would the parties reach an agreement unless they were up to no good?”); see also E. THOMAS SULLIVAN & JEFFRY L. HARRISON, *UNDERSTANDING ANTITRUST AND ITS ECONOMIC IMPLICATIONS* 185–188 (4th ed. 2003) (discussing the U.S. Supreme Court's treatment of conscious parallelism).

⁶⁰ See STEPHEN F. ROSS, *PRINCIPLES OF ANTITRUST LAW* 163–165 (1993).

⁶¹ ERNEST GELLHORN, WILLIAM KOVACIC, & STEPHEN CALKINS, *ANTITRUST LAW AND ECONOMICS IN A NUTSHELL* 282 (5th ed. 2004).

⁶² AREEDA & HOVENKAMP, *supra* note 8, ¶ 1415.

⁶³ See SULLIVAN & HOVENKAMP, *supra* note 31, at 297–98. *But see* Michael D. Blechman, *Conscious Parallelism, Signaling and Facilitating Devices: The Problem of Tacit Collusion Under the Antitrust Laws*, 24 N.Y.L. SCH. L. REV. 881 (1979) (addressing the problem of oligopolist price-fixing in the absence of any express agreement to restrain trade).

showing that defendants were acting against their self-interest provides us with a primary light in viewing market players' conduct and performance, this factor should be highly ranked in assessing all plus factors.

2. Traditional Conspiracy Evidence

Professor Areeda argues that the following three factors *must* exist in collusion: (1) Opportunity to Collude, (2) Motive to Collude, and (3) An Overt Act Consistent with Furthering Concerted Action (versus an act furthering independent action).⁶⁴ As he put it, the evidence found under a traditional conspiracy is almost identical to the proof of evidence required under criminal conspiracy laws.⁶⁵ However, in the antitrust context, the Factors 2 and 3 under this second category should not be considered relevant plus factors. The Motive to Collude here does not appear to be different from the Motive for Agreement factor under Category 1 (Evidence to Show Interdependence). Thus motive to collude should not operate as a plus factor.

Although we almost always find certain overt acts in collusion cases, we do not need to establish them as plus factors in practice because they are irrelevant. The evidence included is simply based upon our after-the-fact observation as opposed to its quality as a plus factor. In any conceivable antitrust litigation involving parallel pricing, there has been evidence that competitors set foot on uniform or similar price increases for a product or service and that they have contacted each other through telephone calls, fax-transmittals, e-mails, and so on.⁶⁶ We are already inferring concerted action, starting from the very first evidence of certain overt acts of parallel price movements.⁶⁷ A more relevant inquiry then, is whether parallel pricing as an overt act is *significant enough* to be suspicious of collusive price-fixing.⁶⁸

In parallel pricing cases, it may be proper to characterize the

⁶⁴ AREEDA & HOVENKAMP, *supra* note 8, ¶. 1416.

⁶⁵ *Id.* ¶ 1417(b).

⁶⁶ See OH-SEUNG KWAN ET AL., GONGJUNG GERRAEBUP SYMGYUL YE BAKSUN (권오승 등 공저, 공정거래법 심결례 100 선) [100 CASES IN FINDINGS OF THE FAIR TRADE COMMISSION] (1996).

⁶⁷ See *In re High Fructose Corn Syrup Antitrust Litig.*, 295 F.3d 651, 662 (7th Cir. 2002).

⁶⁸ In fact Professor Areeda's methodology also contains significant price parallelism because "incredibly" simultaneous price increases are generally found in conspiracy findings. See AREEDA & HOVENKAMP, *supra* note 8, ¶ 1425 (this section is titled "'Unnatural Parallelism' Too Close for Coincidence and Unexplainable by Mere Interdependence: Actions Contrary to Self-interest").

evidence that defendants had substantial opportunities to coordinate prices as a plus factor. To weigh the anecdotal evidence, courts consider the credibility of written documents, witness statements, or testimony to rely on in deciding cases, which is a matter of the court's sole discretion. If we collected a substantial degree of credible evidence of inter-firm contacts, we would not need to worry about taking into account additional evidence. In other words, the opportunity to collude does not have much evidentiary power; otherwise, we would not have cases contestable enough to get into a courtroom.⁶⁹

3. Other Evidence

Professor Areeda defines Category 3 (Evidence of Poor Economic Performance) as comprising various factors even if narrowly interpreted. Illustrative are a defendant's restriction or curtailment of output, stable market shares, and prices that fail to fluctuate with demand, high profit margins, data, or long-run patterns of price identity. Besides these, he inserts the evidence of market structure examined in Part II into Category 3.⁷⁰

As noted above, the market structural features that have led us to assume the plausibility of collusion can also functionally operate as circumstances that impede or facilitate price coordination possibilities.⁷¹ It is true that the probative value of structural evidence is highly likely to depend on interpretations of various economic theories and arguments.⁷² Still, the variable market features are relevant evidence as long as they tend to have evidentiary strength in supporting or weakening the existence of collusion. Additionally, they should be placed into a disparate plus factor because the variables may be ranked differently among themselves at the hierarchical levels within an analytical framework.

Finally, as legitimate business justification defenses apply to a every plaintiff's plus-factor-related argument, so do facilitating practices.⁷³ Facilitating practices mean those practices that tend to make it easier for firms to reach agreements or otherwise coordinate their behavior in an

⁶⁹ See *id.* ¶ 1417(b).

⁷⁰ *Id.* ¶¶ 1430, 1434(d)(3).

⁷¹ See *id.* ¶ 1434(d).

⁷² Understandably, Professor Areeda is quite skeptical of the effectiveness of the factor's operation in practice, noting that "[u]nfortunately, most actual cases show too many substantial uncertainties in appraising both the strength of the various impediments to oligopolistic collaboration and the degree of non-competitive performance." *Id.* para. 1434(d)(3).

⁷³ See *id.* ¶ 1434(e).

anticompetitive manner, to detect divergence from such agreements or coordination, and to punish such divergence. The practices should be categorized into one plus factor, not because they are not related to other factors (they are), but because looking at it in isolation allows us to better appreciate the interaction of the factor with other plus factors.

IV. THE JUDICIARY'S UNDERSTANDING OF OLIGOPOLY PRICING

Part II discussed the theoretical and practical limits of what antitrust law should and can do about parallel pricing conduct. This section focuses on how and to what extent the contemporary judiciary has recognized the price leadership theory and how their economic understandings may affect the outcome of cases.⁷⁴ The recent findings of Korean reviewing courts seem highly similar to European Union antitrust jurisprudence but slightly different from Japanese antitrust jurisprudence. In addition to Korean and U.S. antitrust cases, Part IV briefly reviews the modern European Union and Japanese antitrust approaches to understanding oligopoly pricing in deciding parallel pricing cases.

A. The U.S. Antitrust Jurisprudence

Economics Professor F. M. Scherer defines the price leadership theory as follows:

Price leadership implies a set of industry practices or customs under which list price changes are normally announced by a specific firm accepted as the leader by others, who follow the leader's initiatives. Wide variations are possible in the stability of the leader's position, the reasons for its acceptance as leader, its influence over the other firms, and its effectiveness in leading the industry to prices that maximize joint profits.⁷⁵

For this matter, Professor Areeda observes that:

⁷⁴ See Dennis E. Carlton et al., *Communication Among Competitors: Game Theory and Antitrust*, 5 GEO. MASON L. REV. 423 (1997).

⁷⁵ SCHERER & ROSS, *supra* note 13, ch. 7, at 248–65. For an in-depth explanation of related game theory in economics, see CARLTON & PERLOFF, *supra* note 13, ch. 6, at 157–99.

“[T]acit coordination” need not imply even a weak commitment or prior understanding as to how each will behave. [A] price leader may assume that others have made a similar calculation about which price will maximize profits. Or the leader may simply proceed by trial and error: raise the price and see what happens, especially where reversing an unfollowed price rise is not very costly. Whether this will in fact occur in a particular oligopoly depends on many factors. The firms may not be all alike. A transaction might be concealed from rivals Many circumstances facilitate or impede oligopolistic collaboration.⁷⁶

The U.S. Supreme Court held in 1927 that “the fact that competitors may see proper, in the exercise of their own judgment, to follow the prices of another manufacturer, does not establish any suppression of competition or show any sinister domination.”⁷⁷ Following the Supreme Court’s lead, the U.S. Courts of Appeals have made more sophisticated observations. The Ninth Circuit Court of Appeals found that

[s]imilarity of prices in the sale of standardized products such as the types of steel involved in this suit will not alone make out a prima facie case of collusive price fixing in violation of the Sherman Act, the reason being that competition will ordinarily cause one producer to charge about the same price that is charged by any other.⁷⁸

More technically, the First Circuit Court of Appeals held that:

[A] firm in a concentrated industry typically has reason to decide (individually) to copy an industry leader. After all, a higher-than-leader’s price might lead a customer to buy elsewhere, while a lower-than-leader’s price might simply lead competitors to match the lower price,

⁷⁶ AREEDA & HOVENKAMP, *supra* note 8, ¶ 1410.

⁷⁷ *United States v. Int’l. Harvester Co.*, 274 U.S. 693, 708–09 (1927).

⁷⁸ *Indep. Iron Works, Inc. v. U.S. Steel Corp.*, 322 F.2d 656, 665 (9th Cir. 1963); *see also Wilcox v. First Interstate Bank of Or.*, 815 F.2d 522, 526 (9th Cir. 1987) (Defendant-bank contended that “it follows the lead of other major banks because to do otherwise would be against its self-interest.”). *But see Esco Corp. v. United States*, 340 F.2d 1000, 1007 (9th Cir. 1965) (finding that the evidence proves a conspiracy is more than a simple price leadership).

reducing profits for all. One does not need an agreement to bring about this kind of follow-the-leader effect in a concentrated industry.⁷⁹

In other words, the price leadership theory postulates that a first mover increases prices expecting that others will follow suit since the commonly reached industry-wide higher prices would make all the competitors better off.⁸⁰ If others do not follow suit, the first mover will quickly return to its original price level (assuming that it has the ability to do so), in which case the reinstated lower prices would not make them better off.⁸¹ With that understanding, courts assume that uniform or parallel price increases in an oligopoly industry are lawful as a rational course of doing business or competing with others.⁸²

B. Korean Antitrust Jurisprudence

In Korean antitrust cases of the 1980s, defendants did not have any chance to advocate the oligopolistic interdependence theory. This was mainly because most cases involved the evidence of actual contracts or direct evidence, which may have shown defendants' actual agreement to fix prices in concert. It was not until 1992 that defendants began to argue that mere interdependent pricing resulted in parallel price increases.⁸³

⁷⁹ *Clamp-All Corp. v. Cast Iron Soil Pipe Inst.*, 851 F.2d 478, 484 (1st Cir. 1988); *see also Reserve Supply Corp. v. Owens-Corning Fiberglas Corp.*, 971 F.2d 37, 53 (7th Cir. 1992) (approvingly quoting *Clamp-All Corp.*).

⁸⁰ Ohgae Cheolgang Jejo Eupche Yi Budanghan Gongdong Hangwiye Daehan Geon (5개 철근제조업체의 부당한 공동행위에 대한 건) [*In re* Collusion of Five Steel Manufacturing Companies], (9509 단체 41) [9509DanChe415], Korea Fair Trade Comm'n, Decision 95-100 (June 5, 1995) (S. Kor.). Here, the KFTC held that the five steel manufacturers are in an oligopoly market and the products of steel are almost the same in terms of their quality and sizes. It reasoned that in such an industry a demand for one company's products would decrease if the company were to increase prices individually without any agreement with other competitors. The KFTC found that this is one of the reasons to support the allegation that that defendants acted in concert to increase prices. *Id.*

⁸¹ *Id.*

⁸² *Cf. Arizona v. Standard Oil Co. of Cal. (In re Coordinated Pretrial Proceedings in Petroleum Products Antitrust Litigation)*, 906 F.2d 432, 443 (9th Cir. 1990). In this case, the defendants argued that "the price increases were so risky that it is implausible to believe that any firm would have undertaken them without some advance agreement from competitors." *Id.* As for this argument, the court noted that "such an argument may often be valid when the relevant market is highly unconcentrated or where the increase cannot be reversed easily or readily without substantial loss of goodwill." *Id.*

⁸³ The first case is the DaeRim and Hyosung case. *See* Daerim Jadongcha Gonggeup Jusik Hoesa Mit Hyoseong Gigye Gonggeup Jusik Hoesa Yi Budanghan Gongdong Hangwiye Daehan Geon (대림자동차공업(주)와 효성기계공업(주)의 부당한 공동행위에 대한 건) [*In re* Collusion of DaeRim Automobile Industry Corp. and HyoSung Mechanical Industry Corp.], (9201 공 022) [9201Gong022], Korea Fair Trade Comm'n, Decision 92-23 (Mar. 9, 1992) (S. Kor.); *see also* KWAN ET AL., *supra* note 66.

Subsequently, the theory has been asserted in most cases wherever circumstantial evidence was required to establish competitors' concerted price fixing in oligopoly markets.⁸⁴

Generally, Korean antitrust tribunals have not accepted the oligopolistic interdependence theory until quite recently.⁸⁵ In one parallel pricing case,⁸⁶ the KFTC noted that individual price increases would result in the reduction of profits and, therefore, are not a rational phenomenon where the price is the major force for competition and sufficient non-price competition is lacking. The KFTC simply reasoned that in such circumstances, when one party increases prices, other parties would be better off if they either do not match the increased prices or increase prices less than the price levels set by the first price mover. It seems that the KFTC's reasoning has resulted from its unwillingness to recognize the technical interactions of oligopolists in determining prices.⁸⁷

In four recent cases, however, Korean antitrust tribunals appear to have accepted the strength of the price leadership theory even though

⁸⁴ See SON, *supra* note 49, at 420.

⁸⁵ See Samgae Haksaengbuk Jeijo Yepche Yi Yieuishincheongye Daehan Geon (3 개 학생복 제조업체의 이의신청에 대한 건) [*In re* Reconsideration Request of Three School Uniform Manufacturing Companies], (2001 심삼 1932) [2001SimSam1932], Korea Fair Trade Comm'n, Re-Decision 2001-052 (Oct. 16, 2001) (S. Kor.); Seoul Appellate Court [Seoul App. Ct.], 2001Nu10716, Oct. 17, 2002, (S. Kor.); Yeolhangae Sonhaeboheom Hoesa Yi Yieuishincheongye Daehan Geon (11 개 손해보험회사의 이의신청에 대한 건) [*In re* Reconsideration Request of Eleven Property Insurance Companies], (2001 심일 2010) [2001SimIl2010], Korea Fair Trade Comm'n, Re-Decision 2001-055 (Nov. 3, 2001) (S. Kor.); Seoul Appellate Court [Seoul App. Ct.], 2002Nu17295, Feb. 3, 2004, (S. Kor.); Neigae Shinyong Card Sayeopja Yi Budanghan Gongdong Hangwiye Daehan Geon (4 개 신용카드사업자의 부당한 공동행위에 대한 건) [*In re* Collusion of Four Credit Card Companies], (2002 유거 0457) [2002YuGer0457], Korea Fair Trade Comm'n, Decision 2002-098 (May 17, 2002) (S. Kor.); Neigae Halbu Geumyoong Sa Yi Yieuishincheongye Daehan Geon (4 개 할부금융사의 이의신청에 대한 건) [*In re* Reconsideration Request of Four Installment Financial Companies], (2000 심이 1267) [2000SimYi1267], Korea Fair Trade Comm'n, Re-Decision 2001-04 (Jan.17, 2001) (S. Kor.).

⁸⁶ See Jongyi Jeijo Samgae Sa Yi Yieuishincheongye Daehan Geon (종이제조 3 개사의 이의신청에 대한 건) [*In re* Reconsideration Request of Three Paper Manufacturing Companies], (9608 조삼 1210) [9608JoSam1210], Korea Fair Trade Comm'n, Re-Decision 96-19 (Oct. 15, 1996) (S. Kor.).

⁸⁷ Rarely have the antitrust tribunals explained why the theory is not applicable to the case in question. In a few instances, however, they have alluded to the reasons. When defendants have alleged that the theory should be applicable to the present case, the KFTC has oftentimes made an alternative argument that the theory has not been well established by adjudication, or that even if the theory holds true, there is other direct evidence to effectively support collusive price-fixing. See Supreme Court [S. Ct.], 2002Du4648, May 27, 2003 (S. Kor.); see also Hwajangji Jeijo Sagae Sa Yi Yieuishincheongye Daehan Geon (화장지제조 4 개사의 이의신청에 대한 건) [*In re* Reconsideration Request of Four Sanitary Paper Manufacturing Companies], (9805 심이 0735) [9805SimYi0735], Korea Fair Trade Comm'n (July 29, 1998) (S. Kor.) (finding the direct evidence that relevant parties' company bills have the same contents for price increases, and that "concrete and clear" evidence is necessary to resolve conscious parallelism cases and implicitly noting that the oligopoly pricing theory is abstractive and unclear).

their position is slightly different from that of the U.S. antitrust jurisprudence. In reconsidering the case, *Three Paper Manufacturers*, the KFTC found that the price increases were reached in coordinated fashion merely by interdependent recognition among defendants.⁸⁸ It noted that while the list prices were uniform, the medium-quality paper in question was a standardized product.⁸⁹ In a separate case involving the collusion of seven cement manufacturers, the Seoul Appellate Court overruled the KFTC's decision, holding that the price leader unilaterally increased prices at the risk of losing market share, and other manufacturers simply followed suit.⁹⁰

In two 2002 cases, *Dongsuh* and *Collusion of Four Sanitary Paper Manufacturing Companies*, the Korean Supreme Court relied upon the oligopolistic interdependence theory in reaching its decisions. In *Dongsuh*, two coffee manufacturers had a combined share comprising 99% of the Korean market. They increased the prices of coffee products at the same time on three occasions. The Korean Supreme Court held that:

It is a matter of course for a firm in the oligopoly market to adequately cope with the prices determined by its competitors. Once one firm finds that it is for its own interest to imitate the competitors' prices, it can independently proceed for the performance without mutual agreements or tacit understandings. For that reason, the fact that the prices of competitive products are uniform or similar in the oligopoly market, standing alone, is not sufficient to infer competitors' agreements or tacit understandings.⁹¹

After *Dongsuh*, the Korean Supreme Court decided *Collusion of Four Sanitary Paper Manufacturing Companies*.⁹² In this case, the

⁸⁸ See Jongyi Jeijo Samgae Sa Yi Yieuishincheongye Daehan Geon (종이제조 3개사의 이의신청에 대한 건) [*In re* Reconsideration Request of Three Paper Manufacturing Companies], *supra* note 86.

⁸⁹ *Id.*

⁹⁰ The original finding of the KFTC appears in Cement Jeijo Chilgae Sa Yi Yieuishincheongye Daehan Geon (시멘트제조 7개사의 이의신청에 대한 건) [*In re* Reconsideration Request of Seven Cement Manufacturing Companies], (9902 심이 0247) [9902SimYi0247], Korea Fair Trade Comm'n, Re-decision 99-23 (May 4, 1999) (S. Kor.).

⁹¹ Supreme Court [S. Ct.], 99Du6514, Marc. 15, 2002 (S. Kor.).

⁹² See Supreme Court [S. Ct.], 2000Du1386, May 28, 2002 (S. Kor.). For comparison of the *Dongsuh* and *Four Sanitary Paper* cases, see Sung-Moo Jung, DokJumKyuJe BupSang Chujung JoHang Ye Kwan Han Yun Gu (정성무, 독점규제법상 추정조항에 관한 연구) [A Study of Presumption Clause under Monopoly Regulation Laws], LL.M. Dissertation, at 87–109 (The Seoul

defendants were held liable for concertedly increasing the prices of sanitary papers at three different times during relevant periods.⁹³ On appeal,⁹⁴ defendants argued that the circumstantial evidence introduced by plaintiff did not have sufficient probative value to permit an inference of concerted action for two reasons: First, defendants had initiated price increases by simply expecting subsequent price coordination by other competitors; second, the circumstantial evidence was not sufficient to show that any tacit understanding had existed among competitors. To support that argument, defendants presented the nature of the sanitary paper industry in depth by providing various characteristics thereof.⁹⁵

The Korean Supreme Court considered the total circumstances and characteristics of current situations in the sanitary paper industry. It affirmed the Seoul Appellate Court's finding that the first price increases appear to have resulted from the followers' imitation of the price leader's price increases.⁹⁶ The reviewing courts held, however, that with respect to the second and third price increase incidents, price coordination experience appears to have been accumulated, and the incidents were not mere imitation as in the first price increase.⁹⁷ They reasoned that each company's costs of raw materials and final prices of products had increased at the same levels leading to the second and third price increases.⁹⁸

That decision highlighted a circumstance that can be used to rebut the presumption of concerted action. At the same time, the circumstance is qualified to limit its potentially far-reaching scope. The reviewing courts found that:

Nat'l Univ., 2003).

⁹³ See *Hwajangji Jeijo Sagae Sa Yi Yieushincheongye Daehan Geon* (화장지제조 4개사의 이의신청에 대한 건) [*In re* Reconsideration Request of Four Sanitary Paper Manufacturing Companies, *supra* note 87].

⁹⁴ Seoul High Court [Seoul High Ct.], 98Nu10839, June 20, 2000 (S. Kor.).

⁹⁵ The characteristics include (1) actual transaction prices are absolutely different among defendants even though the sanitary paper industry traditionally has reached the same list price levels many times in order to accept distributors' requests and facilitate price comparison among manufacturers; (2) the composition of raw materials for sanitary paper products is almost the same; (3) as most of the raw materials are composed of pulps or old papers that rely on imports, they are highly influenced by exchange rates; (4) the combined market shares of the four manufacturers are about 85 percent and they are in the oligopoly market; (5) most of the agents for sanitary products also sell other companies' products; (6) as sanitary papers were a necessity, they are subordinated to government's price regulation, and the first price increase in particular is highly affected by the prior practices; (7) if the price leader had increased prices, others imitated the price increases by reflecting the increases for business strategic reasons; and (8) each company's fees for sales promotion have been increasing as a result of vigorous competition among themselves. *Id.*

⁹⁶ See Supreme Court [S. Ct.], 2000Du1386, May 28, 2002 (S. Kor.).

⁹⁷ *Id.*

⁹⁸ *Id.*

[A] presumed illegal price-fixing can be rebutted where in oligopoly markets, a price leader determines the price levels of products by independent judgment and other followers unilaterally imitate the price increases by merely acting in concert. The case surely should not apply where the leader increases the prices anticipating that if the leader initiates the price increases the followers will act in concert in light of such market conditions as prior business practices.⁹⁹

C. European Union and Japanese Antitrust Jurisprudence

Under the European Union competition law, Article 81(1) prohibits “[a]ll agreements between undertakings, decisions by associations of undertakings and concerted practices. . . .”¹⁰⁰ To the extent that competitors’ parallel pricing does not fit within the meaning of agreements or decisions in Article 81(1),¹⁰¹ the issue is whether certain parallel price increases can be considered *concerted practices* thereunder.

The European Court of Justice discerned between agreements or decisions and concerted practices, defining a concerted practice as “a form of coordination between undertakings, which, without having been taken to the stage where an agreement properly so called has been concluded, knowingly substitutes [practical cooperation between them]

⁹⁹ Seoul High Court [Seoul High Ct.], 98Nu10839, June 20, 2000 (S. Kor.). Actually, the Seoul Appellate Court found three reasons that a presumed concerted action could be rebutted, although one of them is relevant here. The other two circumstances are: (1) where the determination of the same or similar prices as externally indicated came into existence by coincidental accord even if it was independently done by independent business judgments without any explicit or implicit agreements or mutual understandings; and (2) where relevant defendants inevitably acted at the same or similar time in the same or similar way to the extent that certain external factors commonly related to other competitors have affected their determinations of price levels in the same fashion. The case should not apply, the Court noted, where although the external factors somehow affected each firm differently, the firms affected by the external factors proceeded to the same or similar concerted action by taking advantage of the tacit understanding that they will act in concert. After this decision, the reviewing courts followed the rebuttable circumstantial evidence. *See* Seoul Appellate Court [Seoul App. Ct.], 99Nu10898, June 5, 2001 (S. Kor.); *see also* Supreme Court [S. Ct.], 2001Du5552, Dec. 12, 2003 (S. Kor.).

¹⁰⁰ Consolidated versions of the Treaty on European Union and of the Treaty establishing the European Community, 2002 O.J. (C325) 1, 64. The “undertakings” generally mean parties or firms, but do not include persons, meaning officers or directors of firms. *See* Case C-364/92, SAT Fluggesellschaft v. Eurocontrol, 1994 E.C.R. I-55; *see generally* RALPH H. FOLSOM, PRINCIPLES OF EUROPEAN UNION LAW 320–29 (2005) (discussing Article 81’s approach to a firm with a dominant position in a market).

¹⁰¹ Like in Korean and U.S. antitrust jurisprudence, written or oral agreements, or even a simple handshake were found to suffice to establish a concerted action. *See* Case 28/77, Tepea BV v. Comm’n, 1978 E.C.R. 1391; *see also* Case 41/69, ACF Chemiefarma v. Comm’n, 1970 E.C.R. 661.

for the risks of competition. . . .”¹⁰² The European Commission held that the disclosure of courses of market conduct intended for adoption by others is prohibited.¹⁰³

In the well-known 1993 *Wood Pulp* case, however, the European Court of Justice found that “[the European Union competition law] does not deprive economic operators of the right to adapt themselves intelligently to the existing and anticipated conduct of their competitors.”¹⁰⁴ In that case where the European Commission had found defendants liable for concertedly increasing wood pulp prices, the European Court of Justice held that “the parallelism of prices and the price trends may be satisfactorily explained by the oligopolistic tendencies of the market and by the specific circumstances prevailing in certain periods.”¹⁰⁵ Relying upon expert testimony about the oligopolistic market structure, the court found that “[t]he producers know that, if they were to increase their prices, their competitors would no doubt refrain from following suit and thus lure their customers away.”¹⁰⁶

A more recent report of the European Commission suggests that the *Wood Pulp* court’s judgment should be “nuanced.”¹⁰⁷ The report summarizes the current legal proposition by saying, “parallel conduct does not in itself constitute proof of a concerted practice, but can be used as strong evidence of the existence of an anticompetitive agreement if such behavior does not correspond to the normal adaptation of market operations to market conditions.”¹⁰⁸ Indeed, some recent European Union cases have conformed to that proposition.¹⁰⁹

Japanese antitrust law has two theories that imply where a concerted action from consciously parallel conduct should be found. They are the intention communication theory, and the common understanding

¹⁰² See Case C-40/73, *Suiker Unie UA v. Comm’n*, 1975 E.C.R. 1668; see also Case C-89/85, *Osakeyhtiö v. Comm’n*, 1993 E.C.R. I-1576; *Cartonboard*, 1994 O.J. L 243/1; *Pre-Insulated Pipe Cartel*, O.J. L 24/1, 129–134 (1999).

¹⁰³ *Suiker Unie*, *supra* note 102. This proposition appears to be the same as that of the qualification found by the Korean Supreme Court in the Four Sanitary Paper Case. Supreme Court [S. Ct.], 2000Du1386, May 28, 2002 (S. Kor.)

¹⁰⁴ *Osakeyhtiö*, *supra* note 102.

¹⁰⁵ *Id.*

¹⁰⁶ *Id.*

¹⁰⁷ *Oligopoly*, Round Table Series, Organization for Economic Co-operation and Development, DAF/CLP(99)25, at 213–14 (1999).

¹⁰⁸ *Id.* at 214.

¹⁰⁹ See *Pre-Insulated Pipe Cartel*, *supra* note 102; see also Case C-204/00, *Aalborg Portland A/S v. Comm’n*, 2004 E.C.R. I-403. To understand the development history of how antitrust tribunals have handled concerted practices, see Julian M. Joshua & Sarah Jordan, *Combinations, Concerted Practices and Cartels: Adopting the Concept of Conspiracy in European Community Competition Law*, 24 *NW. J. INT’L L. & BUS.* 647 (Spring 2004).

theory.¹¹⁰ The intention communication theory states that although there is no direct evidence, the substance of parallel conduct can be inferred if there existed a communication among competitors.¹¹¹ Under this theory, communication infers parallel conduct if it can be shown that there were meetings, communications, or information exchanges in any fashion that cause competitors to act in concert. If there was no actual communication among competitors, parallel conduct itself is not enough to constitute an illegal concerted action.

In contrast, the common understanding theory does not demand actual communications among competitors. Relevant competitors' communication of an intention to increase prices can be found when parallel conduct would not exist in the absence of communication considering the substance of parallel conduct. The recent *Toshiba Chemical Corporation* case is illustrative of the common understanding theory.¹¹²

In that case, Toshiba Chemical Corporation and seven other companies were held liable for raising in concert the delivery prices of copper-plated phenol paper laminate.¹¹³ The evidence showed that the companies met with one another to exchange opinions of ways to stabilize the decline of sales prices and to increase the prices of copper-plated laminate for printed circuit boards.¹¹⁴ There was also evidence the eight companies increased the prices subsequent to the meeting.¹¹⁵ In its appeal, Toshiba Chemical argued for the lack of substantial evidence to support the existence of concerted action.¹¹⁶

The Tokyo High Court clarified the circumstances in which a concerted action may be found in parallel pricing cases. It held:

¹¹⁰ GWAJEON SIJANG YE YITEOSEO YI CARTEL GYUJIE YI GWAJEI (과점시장에 있어서의 카르텔 규제와 과점) [THE PROBLEMS OF CARTEL REGULATION IN OLIGOPOLY MARKETS]; GONGJEONG GEORAE GWANRYEON KUKWOI JARYO SAREI BUNSEOK MOEUMJIP (III) (공정거래 관련 국외자료, 사례분석 모음집 (III)) [THE COMPENDIUM III OF FAIR TRADE RELATED OVERSEAS MATERIALS AND CASE ANALYSIS]; GONGJEONG GEORAE SAMPAN GWANRIGWAN (공정거래위원회 심판관리관) [THE KOREA FAIR TRADE COMMISSION JUDGMENT MANAGEMENT DIVISION], at 168–85 (2001).

¹¹¹ See HUR, *supra* note 49.

¹¹² *In re Toshiba Chemical Corp.*, The Tokyo High Court Judgment, September 25, 1995; see also *In re Asahi Newspaper Companies and 26 Other Companies*, the Tokyo High Court Judgment 1995 (Decision File: Volume 4, at 145) (The original decision of the JFTC is found in that same volume, at 4); *In re Five Kraft Liner Manufacturing Companies*, the Japanese Fair Trade Commission, Decision, June 5, 1981 (Decision File, Volume 28–32).

¹¹³ *Toshiba Chemical Corp.*, *supra* note 112.

¹¹⁴ *Id.*

¹¹⁵ *Id.*

¹¹⁶ *Id.*

“Communication of intent” is the mutual recognition or anticipation of a price increase by multiple entrepreneurs for the same products or services, and the intention to act upon this in accordance with others. . . . Mutual recognition of other entrepreneurs’ price increases and silent acceptance is interpreted as sufficient evidence (this is said to be “communication of intent” through tacit means). Unless there are special circumstances demonstrating that a certain entrepreneur made independent decisions that it can withstand price competition in the trading market without regard for the behavior of other entrepreneurs, we should presume that these entrepreneurs have mutual intentions of adopting collusive behavior, and that there was “communication of intent.”¹¹⁷

The Court dismissed Toshiba Chemical’s appeal, holding that there was sufficient evidence to show the required communication of intent.¹¹⁸ In practice, however, a majority of courts are in line with the intention communication theory requiring actual communications among competitors.¹¹⁹

The reasoning of the European Court of Justice in the *Wood Pulp* case is almost the same as that of Korean antitrust jurisprudence. It is similar to that of the U.S. antitrust jurisprudence except for one fine distinction between Korean or European Union’s antitrust law and U.S. antitrust law. The distinction, found in alternative ways of detecting oligopoly pricing, might produce different outcomes.

Except where circumstances may require otherwise, U.S. antitrust jurisprudence generally assumes that it is a normal course of business to follow a price leader’s price increase and thus finds oligopoly pricing lawful.¹²⁰

Conversely, Korean and European Union antitrust courts are generally likely to find that if a first mover increases the product prices

¹¹⁷ Excerpted from the report of Oligopoly, Round Table Series, Organization for Economic Co-operation and Development, *supra* note 107, at 213–14 (1999).

¹¹⁸ Toshiba Chemical Corp., *supra* note 112.

¹¹⁹ See MYOUNG-JO YANG, BUDANGHAN GONGDONGHAENGWI CHUJUNGOHANG YI HAPRIJUK JUKYOUNG BANGAN YUNGU (양명조, 부당한 공동행위 추정 조항의 합리적 적용방안 연구) [THE PLAN FOR REASONABLE APPLICATION OF THE PRESUMPTION CLAUSE UNDER UNFAIR CONCERTED ACTION] (THE TASK FORCE REPORT OF THE KOREA FAIR TRADE COMMISSION, THE KOREA FAIR TRADE COMMISSION ARCHIVE, at 15–25 (1995)).

¹²⁰ See Yao & DeSanti, *supra* note 18, at 113–42.

in a particular oligopoly industry, other market players may *not* increase the product prices in tandem or match the increased prices. By choosing not to do so, others can take the first mover's customers away. The normal market behavior here is that competitors do not follow the first mover's price increases; by following the mover to increase prices they may be acting against their own self interests.

Of practical significance is that under the viewpoint of Korean or European Union jurisprudence, competitors' parallel pricing in an oligopoly market is likely to be viewed suspiciously. At the litigation stage, it is the defendant's burden to show the absence or lack of variations or limitations that may invalidate the price leadership theory in general. It is also the first mover's ability to return to the original price level without losing market share or profits in particular. By contrast, a counterpart U.S. defendant may be allowed to merely allege the operation of the oligopoly pricing theory.

If a court believes that price coordination in oligopoly markets is a natural market phenomenon, it can obviate any viable claim of concerted action on the part of plaintiff. Regardless of the theory's validity, Korean and European Union antitrust jurisprudence, and the common understanding theory under Japanese antitrust law, parallel pricing may be reached with the premise that circumstances can establish relevant parties' *tacit* price coordination possibilities, that is, their connected and subjective mental intent to collude.¹²¹

V. CONCLUSION

In Korean antitrust law, it seems clear that any viable future legislation could not possibly encompass every conceivable plus factor. The evolving marketplace and the diversifying of market players' conduct create substantially different fact patterns and shape considerably diverging economic theories. It is impossible for any particular piece of legislation to keep abreast of the rapidly changing market phenomena.¹²² Further, even with enumerated plus factors, antitrust tribunals have yet to reach conclusions of law from findings of facts in conscious parallelism cases.¹²³ To make reasonable and

¹²¹ See RICHARD A. POSNER, *ANTITRUST LAW* 93–94 (2d ed. 2001); see also *In re High Fructose Corn Syrup Antitrust Litig.*, 295 F.3d 651, 662–66 (7th Cir. 2002).

¹²² For an insightful explanation of dynamic but legitimate business conduct, see PORTER, *supra* note 18.

¹²³ See SON, *supra* note 49.

predictable economic analysis of the proffered evidence, a more sophisticated analytical framework must be properly delineated and developed on a case-by-case basis.¹²⁴

A. Ascertaining the Scope of Additional Evidence

For inferential proof of collusion, the adduced evidence may be divided into the four types: (1) direct evidence; (2) circumstantial evidence; (3) evidence to show interdependence; and (4) evidence of plus factors. Different definitions are used for the terminologies that describe the types of evidence. Few doubt that direct evidence is understood as any contract or evidence that competitors actually agreed to increase prices (for example, witness statements or testimony of direct contacts among competitors—so-called smoking-gun evidence).

However, courts sometimes pigeonhole additional evidence, circumstantial evidence, or plus factors in disparate fashion. The term *additional evidence* is employed in three different ways. On one side, additional evidence measures evidence that supports the direct evidence only by dint of conduct or circumstances (for example, opportunities for competitors to meet). The evidence used in that manner does not include either evidence to show interdependence by market structures or evidence of plus factors.¹²⁵ On the other hand, additional evidence may mean any sort of evidence—including evidence to support the existence of direct evidence, evidence to show interdependence, and other plus factors. In the middle is the view that evidence to show interdependence and other plus factors go together under the conceptual umbrella of additional evidence.

The meaning of additional evidence is as variable as that of plus factors.¹²⁶ In the broadest sense, a relevant plus factor is any evidence except direct evidence. In this sense, circumstantial evidence is equivalent to plus factors. In the narrowest sense, circumstantial

¹²⁴ See generally RICHARD A. POSNER, *ECONOMIC ANALYSIS OF LAW* (5th ed. 1998); see also Hochberg, *supra* note 6, at 161–68 (arguing that “[s]ome of the nation’s economic and legal talent should take some time off from opining about economic issues and enlarging our fund of knowledge ... and, instead, devote their considerable skill and energy to trying to generate data and develop simple rules and presumptions to resolve the great majority of cases, be they mergers or restraints or other conduct under the Sherman Act”).

¹²⁵ See AREEDA & HOVENKAMP, *supra* note 8, paras. 1410–15.

¹²⁶ See DAE-SIK HONG, KWAJUM SIJANG YESEUYI HAYYI YI CHUJUNG KWA GYI BUNBOK (과점시장에서의 합의의 추정과 그 번복) [PRESUMING AND REBUTTING AGREEMENT IN THE OLIGOPOLY MARKET]; Gyeongjei Bup Panrei Yeongu Jei 1 Gwan (경제법판례연구 제 1 권) [Economic Law Case Study vol. 1]; Gyeongjei Bup Panrei Yeongu Hoe (경제법판례연구회) [Economic Law Case Study Society], ch. 3 (2004).

evidence, evidence to establish interdependence, and plus factors are considered three unconnected concepts. For analysis purposes, circumstantial evidence may be broken down into two parts in light of the characters that relevant evidence possesses: noneconomic or conspiracy evidence (e.g., opportunity to collude) and economic evidence (e.g., concentrated market structure).¹²⁷ To avoid confusion in antitrust analysis, the following definitions are clarified at the outset:

(1) *Direct evidence*: Any uncontested evidence that show the competitors agreed on price increases by inter-firm meetings, which does not need any help from other evidence in finding unlawful price-fixing.

(2) *Circumstantial evidence*: Any type of evidence to indicate the competitors' concerted conduct for price-fixing, which is divided into three parts as shown above; (i) evidence to support the direct evidence; (ii) evidence to establish interdependence; and (iii) plus factors as defined below.

(3) *Evidence to establish interdependence*: Economic evidence of market structures that show the competitors' interdependence.

(4) *Plus factors*: Economic evidence of not only structural features but also market players' conduct or performance that may strengthen or weaken the existence of price-fixing.¹²⁸

B. Constructing Groundwork for Analysis

Table 2 shows general analytical steps to take when considering circumstantial evidence for the task of inferring concerted conduct from parallel pricing. In a typical collusive parallel pricing case, we start with direct or anecdotal evidence of parallel price movements and inter-firm contacts. If the smoking gun evidence of meetings, letters, or fax

¹²⁷ See POSNER, ANTITRUST LAW, *supra* note 121, at 69–93. For an observation of the relevant dichotomy between conspiracy theory and other methods, see Randall David Marks, *Can Conspiracy Theory Solve the "Oligopoly Problem?"*, 45 MD. L. REV. 387 (1986).

transmittals among competitors is sufficiently credible, we should not be concerned about circumstantial evidence. In most cases, however, direct evidence is subject to different interpretations. This is problematic because antitrust tribunals generally require clear-cut evidence of actual agreements. For that reason, evidence of inter-firm contact functions as circumstantial evidence to corroborate the existence of concerted conduct.

TABLE 2. The Analytical Steps According to the Types of Evidence

Evidence		Requirements	<i>Implications</i>
Direct	1. Opportunity to collude	Sufficient particularities	If found not credible, becomes circumstantial evidence
	2. Parallel pricing	Significant identities, simultaneities	If found significant enough, a viable claim may be shown
To Show inter-dependence	3. Market structure	Signs of collusion: concentration or limiting variables	Economic plausibility of whether collusive price-fixing may be assumed from the structural features
Plus factors - To Infer price-fixing from market phenomena		Facilitating or impeding coordination	Circumstances that may make concerted conduct more likely than not
	4. Market players' conduct	Acting against defendant's economic self-interests	The validity and extent of whether independent business justifications undermine alleged concerted conduct
	5. Industrial performance	Prior and existing outward looks	Anticompetitive results being more or less consistent with concerted conduct

Mere parallel pricing can constitute conscious parallel pricing if

evidence of interdependence can be shown.¹²⁹ In the Table above, the first three numbered elements in the Evidence column are united to satisfy the notion of interdependence. In general, we consider pertinent market attributes in the industry where alleged conspirators exist for purposes of finding out the interplay and magnitude of a couple of facets—the significant circumstances that make the market highly concentrated and variables that can offset the tendency of price coordination. More specifically, analysis of the first facet allows us to see the place where relevant competitors are predestined to play; that is, the specific structural setting where they are playing with one another. The second facet intends to uncover certain hurdles that can hinder the convergent orders inside the concentration core conducive to collusion. Therefore, the degree of interaction may predictably lead us to apprehend a signal of price fixing in a particular industry.

Collusive price fixing leaves clues that must be acted upon. In conjunction with the interdependence evidence, we need additional evidence or plus factors to reinforce or counteract the conspiratorial characteristics found in that particular marketplace. Broadly construed, all the plus factors have the common function of showing competitive or noncompetitive economic phenomena, which are subject to divergent interpretations. A relevant defense argument here is that the parallel price movements, though significant, are justified in terms of valid business purposes. This defense is applicable to all initial offenses that a plaintiff may bring forward to establish concerted conduct of alleged conspirators. The question then becomes: How should we supply operative economic contents in performing the antitrust law's analytical works with additional evidence in terms that can be understood and applied within the economic context?

C. Price Leadership Theory

To the extent that other anecdotal and economic evidence permits an inference of illegal price fixing, the argument that mere interdependent pricing caused price increases in parallel fashion does not end the cases. Judicial recognition of the price leadership theory, however, can have a considerable influence over the outcome of litigation. The theory teaches that competitors may naturally and inherently get to uniform or parallel pricing even in the absence of agreements.

¹²⁹ For a keen comparison of different determinants between concentrated industries and fragmented industries, see PORTER, *supra* note 18, at 3–33, 191–200.

The price leadership theory, in its function, empowers defendants to forge ahead in a couple of ways. Given the oligopolistic market structure or the highly competitive nature of homogeneous products, defendants can simply allege that it is inevitable for the industry to stick to uniform pricing. They can also allege that substantial additional evidence must be established with significant price coordination to find illegal price fixing. If an antitrust tribunal believes in the strength of the theory, it may tip the balance in favor of the defendants, particularly where the facts suggest that a benign explanation for price increases is equally plausible with a collusive explanation. As a result, the theory—if found to be valid—can effectively challenge every endeavor on the part of the plaintiff to establish the conspiratorial nature of parallel pricing.

U.S. courts have the tendency to assume the theory's operation in deciding parallel pricing cases, whereas Korean and European Union tribunals are just starting to take the theory seriously in conscious parallelism adjudication. Japanese antitrust jurisprudence by and large focuses on the existence of an actual communication of intent among relevant competitors, rather than relying on the oligopoly pricing theory for purposes of inferring concerted conduct from competitors' parallel pricing.

The different beliefs imply that defendants in Korea or the European Union may bear the higher burden of establishing the theory's validity than their U.S. counterparts. In fact, Korean antitrust practice has revealed that defendant businesses are required to show that the theory applies in terms of a particular industry's structure, conduct, and performance. Therefore, it seems obvious that the outcome of similar parallel pricing cases is likely to be affected in part by whether and to what extent an antitrust bench is willing to accept the theory's strengths and weaknesses under the circumstances.