The Identification of Tacit Collusion in Oligopolistic Markets

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The Identification of Tacit Collusion in Oligopolistic Markets

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Abstract

Many jurisdictions consensually consider cartel conduct as the most dangerous competition law infringement. To combat cartels, enforcement authorities use special regulations such as leniency programs to detect cartels, and establish severe administrative sanctions and criminal penalties up to imprisonment.

The identification and verification of cartel conduct is no easy task for enforcers; that task is even more challenging in oligopolistic markets. Oligopolistic market conditions enable market actors to achieve price coordination without express and direct communication inter se; a practice that is often referred to as *tacit collusion* in the relevant literature. There is a ongoing debate over the definition of tacit collusion. Due to the absence of explicit and direct communication, whether tacit collusion should be recognized as a type of cartel conduct is a controversial question among jurisdictions as well as scholars. Additionally, there exists some sort of confusing understanding in the competition law practitioner and regulator communities concerning the distinction between the notions of *conscious parallelism* and *tacit collusion*.

This dissertation thesis strives to clarify the definition of tacit collusion so that it may be helpful in distinguishing certain practices from merely lawful oligopolistic interdependent conduct, and based on the Japanese experience, this thesis includes regulatory recommendations useful for the prevention of tacit collusion in oligopolistic markets.

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List of Abbreviations

DG Competition	Directorate-General for Competition (European Commission)
DOJ	United States Department of Justice
EU	European Union
FTC	US Federal Trade Commission
ICN	International Competition Network
JAMA	Japanese Antimonopoly Act
JFTC	Japan Fair Trade Commission
OECD	Organization for Economic Cooperation and Development
RFAS	Russia Federal Antimonopoly Service
US	United States
UzCC	Uzbek Competition Committee

THESIS INTRODUCTION

> "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."
>
> Adam Smith, The Wealth of Nations[1]

I. Problem statement

Competition laws treat hardcore cartels as egregious violations due to their harmful effects on productive efficiency, consumer welfare, and their undermining of the fundamental principles of a free market economy.[2] A cartel is a form of business combination on a contractual basis, which aims to restrict competition in a market through fixing prices, sharing market, rigging bids and restricting production. At present, anti-cartel regulation has become a priority policy in the majority of the 112 competition jurisdictions all over the world.[3] The legal consequences of cartel participation may be extremely severe for cartel participants, considering that these may range from substantial administrative fines to several years of imprisonment, depending on the jurisdiction.

Firms engaging in cartel conduct are well-aware of the potential for illegality and of the potential consequences in case of detection by competition authorities. Therefore, firms have adapted to more sophisticated means to collude and to avoid leaving any

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[1] *See also* in High Fructose Corn Syrup, 295 F.3d at 662 ("[w]e have an understanding within the industry not to undercut each other's prices". "our competitors are our friends. Our customers are the enemy.")

[2] Maurice Guerrin and Georgios Kyriazis.Cartels: proof and procedural issues. *Fordham International Law Journal* 16 (1992): 274.

[3] William E. Kovacic et. al., Plus Factors and Agreement in Antitrust Law, 110 *Michigan Law Review* (2011): 394.

paper trail or other evidence of cartel agreement. In more recent years, a modern form of price collusion may be seen to arise in connection to the use of sophisticated digital and algorithmic pricing tools that raise new concerns in competition law given that they may be considered to facilitate cartel behavior. In this regard, competition law practitioners face two key challenges in dealing with cartel cases:

First, to condemn cartels, competition law requires the existence of an interfirm agreement or communication to establish liability. As a result, enforcement authorities must find and prove that price coordination resulted from the *agreement* or *communication* among firms; in this regard, the main problems in cartel cases occur particularly over the clarification of whether firms achieved agreement or communication. There are various means of communication, but what kind of communication/agreement matches the legal requirement is not always clear. The notion of *agreement* is of greater importance in oligopolistic markets where a small number of firms creates a mutually interdependent environment which may facilitate price coordination without explicit and direct communication. As a result, parallel price movements frequently occur in oligopolistic markets. Such a phenomenon is often referred to in the literature as *conscious parallelism*, or *tacit collusion*.

Due to the absence of an explicit agreement or communication among firms, the majority of jurisdictions exempts *conscious parallelism* from the scope of cartel conduct. That is, were parallel price elevation to result from oligopolistic interdependency without the presence of explicit and direct communication, this would generally be lawful conduct under the competition laws of many jurisdictions.

However, it remains the case that specific oligopolistic market conditions enable firms to achieve desirable price coordination without the need for direct communication. In particular, the use of facilitating practices replaces communication for firms thus

making collusion easier to occur. Facilitating practices are considered to be lawful and permissible conduct. Thus, it is challenging to establish whether the behavior of firms satisfy the requirement of *agreement or communication* to infer collusion.

The question of how to distinguish between lawful interdependent *parallel pricing* and implicit cartel conduct (*tacit collusion*) remains controversial in competition law. Competition laws fail to draw a clear distinction between the above two categories. What is more, there is no consensus between scholars and practitioners over when conscious parallelism crosses into tacit collusion. Some commentators argue that conscious parallelism ought to be included into the definition of cartel conduct given that there is a 'meeting of mind' between firms in such cases.[4] Others disagree and believe that conscious parallelism should not be regarded as collusion since such parallel conduct is unilateral firm conduct, and may just be rational and normal oligopolistic behavior.[5] Consequently, there is much conceptual uncertainty and doctrinal confusion concerning the status of tacit collusion in competition law.[6]

Second, another issue regarding tacit collusion relates to the standard of proof. The high degree of secrecy surrounding cartels makes identification of direct evidence rarely attainable. Although circumstantial evidence has become admissible for a finding of cartel behavior, court practice often disregards indirect evidence. Due to the high evidentiary standards for a finding of tacit collusion, to do so based on circumstantial evidence presents a challenging task for enforcement authorities.[7] To infer collusion,

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[4] Richard A. Posner, Oligopoly and the Antitrust Laws: A Suggested Approach, 21 *Stanford Law Review* 1562 (1969).

[5] Donald F. Turner, The Definition of Agreement Under the Sherman Act: Conscious Parallelism and Refusals to Deal, 75 *Harvard Law Review* 655 (1962) [hereinafter Turner, *Conscious Parallelism]*.

[6] William E. Kovacic, An integrated competition policy to deter and defeat cartels. *The Antitrust Bulletin* 51, no. 4 (2006): 814.

[7] Marilena Filippelli, *Collective Dominance and Collusion: Parallelism in EU and US Competition Law*. Edward Elgar Publishing, 2013:xii.

courts have often demanded additional evidence – the so-called *plus factors*. Nevertheless, as practice suggests, the plus factor test has failed to solve the evidentiary problem thus resulting in persistent dissatisfaction.

Lastly, a further reason that the regulation of conscious parallelism is problematic in competition law is the absence of adequate *ex-post* remedy measures. The analysis demonstrates that *ex-post* regulation has been ineffective for enforcement authorities. It is commonly recognized that prohibiting firms from taking into account rivals' strategies to behave in an oligopolistic market would be the wrong policy. Therefore, it is necessary to consider alternative methods, possibly *ex-ante,* to prevent tacit collusive schemes in a market.

II. Purpose of the study

The primary goal of this dissertation is to contribute to the theory of tacit collusion in competition law. In a practical sense, it aims at the better regulation of price-fixing collusion in oligopolistic markets. In particular, this dissertation clarifies the definition of tacit collusion, and makes specific recommendations to reduce the scope for tacit collusion in a market. Lastly, the dissertation aims at drawing out lessons for Commonwealth of Independent States[8] (CIS) referring to the case of Uzbekistan from the experiences of advanced jurisdictions to improve anti-cartel regulation in the region. Unlike the advanced jurisdictions, CIS countries have a shortage of recourses, institutional imperfections, a lack of sufficient expertise and practical experience in the field of combating cartels. Furthermore, CIS countries have a unique register system of

[8] Commonwealth of Independent States (CIS) is the international organization, or alliance of countries that used to form the Soviet Union. The CIS's functions are to coordinate its members' policies regarding their economies, foreign relations, defense, immigration policies, environmental protection, and law enforcement. Current members of CIS are nine states:
Russia, Belarus, Kazakhstan, Kyrgyzstan, Tajikistan, Uzbekistan, Armenia, Azerbaijan, Moldova.

dominant firms to control price increase in the market. In this regards, the issue how CIS countries should treat tacit collusions raises legal concerns, which the current dissertation will address. Although the dissertation provides policy recommendations for CIS countries, it is also applicable for some developing countries with similar economic and regulatory conditions.

III. Research questions

The central research questions are as follows:

1) What is the definition of *tacit collusion*? How should we distinguish between lawful conscious parallelism and illegal tacit collusion?

2) How can tacit collusion be identified?

3) What additional measures should be considered to neutralize or limit tacit collusion risks associated with the use of facilitating practices?

IV. Methodology

The research mostly adopts the doctrinal approach by examining the current literature on cartels and tacit collusion. Another primary research methodology lies in the analysis of enforcement practices, case study, and the experience of advanced jurisdictions. Furthermore, the thesis applies a comparative study methodology to determine the pros and cons of cartel regulation in advanced jurisdictions in order to identify the lessons for CIS countries including Uzbekistan.

V. Limitation of the study

The scope of the thesis is limited to price-fixing cartels in oligopolistic markets. More specifically, the dissertation focuses on price elevation collusion. A price reduction and other forms of cartels are beyond the scope of this dissertation. Narrowing the scope

of this dissertation, the study concentrated more on price-fixing cases resulting from tacit collusion in upstream oligopolistic markets.

VI. Outline of the dissertation

The dissertation is organized in four chapters.

Chapter I introduces the general concept of cartel conduct, including fundamental theory and regulatory challenges of tacit collusion in oligopolistic markets.

Chapter II observes cartel regulations in three advanced jurisdictions/competition law regulatory areas: namely, the US the EU, and Japan. This chapter also explores the legal position concerning the issue of tacit collusion in these jurisdictions, and highlights some enforcement challenges. Furthermore, Chapter II provides a comparative analysis to explore similar and different aspects of cartel regulation in those three jurisdictions.

Chapter III discusses the theory and scholarly opinions on tacit collusion in oligopolistic markets. In particular, this chapter evaluates and summarizes scholarly proposals on the definition of tacit collusion and their potential to remedy the oligopoly problem.

Lastly, Chapter IV provides the analysis of the former Japanese reporting system to draw the necessary conclusions to regulate and prevent tacit collusions in oligopolistic markets. Also, this chapter overviews the attributes and challenges of current cartel regulation in Uzbekistan, and in light of the experiences of advanced jurisdictions, this dissertation concludes with policy recommendations to improve the efficiency of cartel regulation in CIS countries on the case of Uzbekistan.

Chapter 1. THE CONCEPT OF COLLUSION

1.1. Introduction

The international community seems to agree that anti-cartel enforcement ought to be a top priority for competition authorities.[9] The competition laws of many countries treat hardcore cartels *per se* as illegal conduct without exception.

Sanctions for cartel conduct are relatively stricter than for other types of violations of competition law, and often pertain to both corporate and individual liabilities. Along with severe administrative sanctions, more than 30 States have criminalized cartel conduct in some forms, including imprisonment, and the list is growing.[10] For instance, under US antitrust law hardcore cartels give rise to criminal sanctions as well as treble damages. Although there is no criminal liability for cartel conduct under EU competition law per se, it imposes high administrative surcharges against cartel conduct, and some EU member states do impose criminal – along with civil – sanctions for breaches of national and EU competition rules.[11] The annual global sum of fines for cartel participants today routinely exceeds hundreds of millions and even billions of US dollars.

Furthermore, to detect cartels, competition authorities have developed leniency programs, which are deemed to be one of the most effective means to combat cartels nowadays. For instance, around 60 countries now combine enhanced sanctions with a leniency program[12] under which the first cartel participant to confess is immunized from

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[9] Antitrust enforcement priorities and efforts towards international cooperation at the US Department of Justice, Remarks by Makan Delrahim Deputy Assistant Attorney General Antitrust Division US Department of Justice Taipei, Taiwan November 15, 2004

[10] John Duns, Arlen Duke, and Brendan Sweeney, eds. *Comparative Competition Law*. Edward Elgar Publishing, 2015:302.

[11] For instance, over half of EU member states now criminalize certain cartel offenses, including Austria, Belgium, Denmark, Estonia, France, Germany, Greece, Hungary, Ireland, Italy, Poland, Portugal, Romania, Slovakia, Slovenia, Spain, the United Kingdom, and the list appears to be growing,

[12] The leniency program is a system of total exemption or a reduction in a penalty of those cartel participants who self-report to the competition authority any illegal cartel conduct and provide active

public criminal or civil prosecution, adopting a carrot and stick approach to destabilizing and deterring cartels. The leniency program is deemed to be the most effective and less costly way of obtaining direct evidence of cartel conduct. Therefore, competition authorities generally regard this policy as significantly contributing to the securing of prosecutions and deterrence. There is no doubt as to the increasing significance of leniency policies for the daily enforcement work of competition authorities. What is more, this is reflected in the growing number of firms applying for leniency reductions in exchange for information and co-operation.

Nonetheless, such leniency programs proved to be less effective for detecting collusion in oligopolistic markets. The specific conditions of oligopolistic markets allow firms to coordinate their prices without any express communication or agreement, which makes it extremely hard for authorities to prove such price coordination cartel behavior on the part of firms. Furthermore, the ordinarily small number of firms in oligopolistic market settings is more likely to yield strong trust bonds between cartel participants thus making recourse to a leniency program less likely. As a result, firms in oligopolistic settings may be more confident that competition authorities would be less likely to find any direct evidence of communication or agreement, and therefore firms may have less of an incentive to consider recourse to a leniency program.

1.2. Understanding of collusion

In simple terms, a *cartel* is an agreement between firms not to compete with each other.[13] No universally accepted definition exists for cartel conduct, and, therefore, the legal definition of a cartel may vary depending on the jurisdictions. Nonetheless,

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cooperation in the investigation. *See,* Development Competition Committee, 'Fighting hard-core cartels: Harm, effective sanctions and leniency programs', *OECD Publishing* (2002): 7-8.

[13] ICN Working Group on Cartels, 'Building Blocks for Effective Anti-Cartel Regimes vol. 1, Defining Hard Core Cartel Conduct, Effective Institutions, Effective Penalties' (June 2005): 9.

there are three fundamental components of a cartel that are remarkably consistent across all jurisdictions worldwide: (i) the presence of an anticompetitive agreement; (ii) between competitors; (iii) to restrict competition.[14]

First, the presence of the anticompetitive agreement implies that firms act upon some mutual understanding, the concord of intention, and some negotiated decision. The means by which firms reach an 'agreement' carry little legal significance in competition laws. A cartel agreement needs not be formal or written, nor is the use of specific words required. Furthermore, a cartel agreement needs not be a legally binding contract, given that it pertains to illegal behavior. Nevertheless, the means of establishing a cartel may be crucial evidence of the existence of an agreement in enforcement practice.

The second component – namely, the need for the agreement to be 'between competitors' – refers to firms at the same level of an industry in question with direct rivalry relations, such as manufacturers, distributors, or retailers. It implies that a cartel should result from the collusion of more than one firm. Therefore, the independent or unilateral conduct of firms does not constitute a violation within the scope of cartels.

The third component – namely, the term 'a restriction of competition' – implies a key aspect of cartel conduct that distinguishes anticompetitive practices from legitimate business agreements between competing firms. Hardcore cartels invariably result in a significant restriction of market competition. That is why hardcore cartels are considered illegal *per se* in all jurisdictions.

The definition of *hardcore cartel* in the OECD Recommendation (1998)[15] extends over the following four practices: price-fixing, bid riggings, output restrictions,

[14] Ibid., 10.

[15] OECD Recommendation of the Council Concerning Effective Action Against Hard Core Cartels, 1998.

and market allocation. Among these hardcore cartel types, price-fixing and bid-rigging arrangements are considered the most severe collusions given that price often is the principal feature against which firms compete.

Economic theories and empirical studies suggest that cartels lead to economic inefficiency and to higher costs for consumers.[16] As for economic inefficiency, cartels create the illusion of competition while effectively operating as a monopoly. This may cause productive inefficiency, loss of incentives to innovate, and market misallocation of resources.[17] Regarding consumer welfare, as cartels usually result in a price increase and output reduction, consumers end up overpaying for products and services, which would have been cheaper were there to be competitive price-setting. Through artificial price elevation cartels may end up 'stealing' money from the customer. That is why creating and maintaining a cartel is one of the most egregious violations of competition laws.

From the viewpoint of business, cartels have always been attractive because they provide an excellent opportunity to increase profits. Nonetheless, cartel formation itself is an uneasy process. Firms will agree to participate in the cartel when they are sure that being in a cartel is more profitable than competing. Even if firms have decided to participate in a cartel, their ability to reach a cartel arrangement relies upon the following factors: the number of firms in and outside the cartel, the extent of the similarity between participating firms that enables profit-sharing, and the challenges of reaching agreement on the collusive strategy they intend to implement. Crucially, cartel participants would have to decide matters such as cartel price, aggregate output, product standards, which all require comprehensive and complicated negotiations given that each firm is likely to

[16] ICN Working Group on Cartels, 'Building Blocks for Effective Anti-Cartel Regimes vol. 1, Defining Hard Core Cartel Conduct, Effective Institutions, Effective Penalties' (June 2005):1.
[17] Carlton, Dennis W., and Jeffrey M. Perloff. *Modern Industrial Organization*. Boston: Pearson-Addison Wesley, 2005:781.

have different costs and market-shares, and therefore there may be disagreement as to the desirable cartel price depending on their circumstances.[18] Therefore, the fewer the firms in a market the greater the capability there is to achieve collusion.

What is more, the risk of cheating could also undermine the possibilities of success of reaching agreement among firms. In order to ensure the success of a cartel, firms ordinarily seek to establish an enforcement mechanism to, among other things, monitor compliance and to punish deviation.[19] Monitoring compliance is the most challenging part necessary for maintaining the sustainability of collusion.[20] Occasionally, uncertain market conditions present opportunities for cartel members for higher profits by cheating rather than by abiding by collusive rules. Here, monitoring compliance is an important means of preventing or identifying such 'cheating' within cartel contexts. More sophisticated hardcore cartels often even have formal auditing systems. Punishing deviation is also essential for cartel success. To ensure that all members will unconditionally execute previously mutually agreed cartel rules, influential cartel leaders may establish individual penalties for cheaters, or threaten cheaters by increasing output in a market, decreasing price or by demanding compensation. The presence of an effective sanctioning mechanism against deviation inside a cartel may lead to the stability of the cartel. Nevertheless, such enforcement mechanisms may be less important or even unnecessary in cases of tacit collusion.

1.3. Tacit Collusion

Cartels may take two forms: *explicit* or *tacit*. Explicit collusion is the most fundamental way of reaching collusive arrangements. Explicit agreements enable firms

[18] Ernest Gellhorn, William Kovacic, and Stephen Calkins. *Antitrust law and economics in a nutshell.* West Academic, 2004:194.
[19] George, J. Stigler, A theory of oligopoly. *Journal of political Economy* 72, no. 1 (1964): 44.
[20] Ibid.

to coordinate market activity with regard to output and prices in a more organized way. The primary trait of explicit agreements is that firms rely on direct inter-firm communication in reaching such agreements. There should be a direct exchange of assurances precisely indicating the presence of agreement to coordinate market behavior. In this regard, the mutual understanding of the parties involved has become a key feature of express collusion. Therefore, there is international consensus regarding the illegal nature of explicit cartel agreements.

On the other hand, the legal approach to tacit collusion is a controversial matter. The term *tacit* means to 'express or carry on without words or speech.' That is, entrepreneurs can refrain from competition without reaching an explicit or direct agreement with each other. The fact that there is no explicit and direct agreement/communication creates a considerable problem for competition law and regulators, who tend to focus on explicit collusion.[21] There is no clear definition of tacit collusion. Tacit collusion is occasionally referred to as *conscious parallelism* in the literature, which is incorrect equation.

According to Keith Hylton tacit collusion typically appears in markets with small numbers of sellers without express agreement among firms. This occurs given that in markets with fewer sellers, firms take the reactions of competitors into account when deciding how much to produce or what price to set.[22] The model of the market that tends to have a small number of firms is an oligopoly.[23] Moreover, there is evidence that in oligopolies it is easier for firms to coordinate price behavior without express and direct communication.[24] Each firm in an oligopoly realizes that it is within the interests of the entire small group of firms to maintain a high price or to avoid vigorous price

[21] Reza Dibadj, Conscious Parallelism Revisited. *San Diego Law Review* 47 (2010): 596.
[22] Hylton, Keith N. *Antitrust law: Economic theory and common law evolution*. Cambridge University Press, 2003:73.
[23] Joseph F. Zellmer, Detecting Collusion in Oligopolistic Industries: A Comparison and Proposal. *Hastings International & Comparative Law Review* 6 (1982): 829.
[24] Marilena Filippelli, *Collective Dominance and Collusion: Parallelism in EU and US Competition Law*. Edward Elgar Publishing, 2013:76.

competition, and the firms act in accordance with this realization. However, the absence of express agreement among firms creates legal uncertainty about whether or not to classify such consequent conduct as a cartel. The issue of tacit collusion remains challenging to resolve due to the theory of oligopolistic interdependence.

1.3.1. Oligopolistic interdependence

To achieve successful economic strategies, oligopolistic market conditions lead each oligopolistic firm to consider the behavior of competitors.[25] The presence of only a few sellers creates a kind of inter-reliant environment, where the pricing behavior of one firm may significantly impact competing firms. As the demand curve for the products of a particular oligopolist in making strategic decisions is usually unknown, firms have to decide based on oligopolistic assumptions what would be the reaction of competitors to the actions of each other. Such pricing behavior in oligopolistic markets implies the presence of interdependence between firms. In simple terms, this means that oligopolistic firms become influenced by the behavior of their rivals and that their behavior, in turn, influences those rivals. Each firm, then, must consider not only what its opponents happen to be doing at the moment but also the way in which rivals may respond to its actions.[26] Due to such interdependence, prices in oligopolistic markets usually do not change as often as under perfect competition conditions.[27]

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[25] Carlton, Dennis W., and Jeffrey M. Perloff. *Modern Industrial Organization*. Boston: Pearson-Addison Wesley, 2005:157.

[26] It should be noted here that despite the fact that oligopolistic market structure creates good conditions for coordination of firms' behavior, it should not be implied that oligopolies always lead to inefficiencies. See, Hawk, Barry E., and Giorgio A. Motta. "Oligopolies and Collective Dominance: A Solution in Search of a Problem." In *Treviso Conference on Antitrust Between EC Law and National Law,*. 2008:60-62.

[27] Massimo Motta *Competition policy: theory and practice*. Cambridge University Press, 2004:142-149; Richard Whish and David Bailey. Competition Law 5th. *London: LexisNexis* (2003): 505-509.

The theory of oligopolistic interdependence shows that firms have little incentive to compete.[28] Due to the small number of firms, price reduction by one firm may attract customers from another firm. Rival firms also have to reduce the price consequentially to avoid loss of customers. It is a destructive situation for all firms because such competition would result in profit minimization. Likewise, unilateral price elevation by an oligopolistic firm would be ruinous for a firm as many customers may leave it for the lower prices of another firm. Therefore, according to the theory of oligopolistic interdependence, firms tend to be dependent on each other, which makes them take into consideration the marketing strategies of other oligopolists.[29] Consequently, firms in oligopolistic markets are highly interested in minimizing price competition and securing non-competitive stability.[30]

Game theory[31] adeptly explains this phenomenon by demonstrating how oligopolists can maintain supra-competitive prices without entering into explicit price-fixing agreements.[32] Simply put, according to game theory, repeated interactions enable oligopolists to predict the possible reactions of competitors[33] and will gravitate towards tacit collusion.[34] Game theory claims that firms in an oligopolistic market are incentivized to coordinate their actions because it results in profit maximization.

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[28] William E. Kovacic *et al.*, Plus Factors and Agreement in Antitrust Law, *110 Michigan Law Rev*iew 393 (2011).

[29] [29] Carlton, Dennis W., and Jeffrey M. Perloff. *Modern Industrial Organization*. Boston: Pearson-Addison Wesley, 2005:157.

[30] Richard Whish and David Bailey. Competition Law 5th. *London: LexisNexis* (2003): 546.

[31] Game theory examines via mathematical methods the behavior of participants associated with decision-making process in probabilistic situations. In economics, game theory analyzes oligopolistic behavior focusing on strategic interactions, moves and countermoves among competing firms.

[32] Thomas A. Piraino Jr, Regulating Oligopoly Conduct Under the Antitrust Laws. *Minn. L. Rev.* 89 (2004): 18.

[33] John E. Lopatka, Solving the oligopoly problem: Turner's try. *Antitrust Bulletin* 41 (1996): 890.

[34] Thomas A Piraino Jr, Regulating Oligopoly Conduct Under the Antitrust Laws. *Minnesota Law Review* 89 (2004): 30

Due to oligopolistic interdependence, any change in policy by one firm resulting in increased sales for it will cause a significant decline in market share of its competitors. Therefore, each firm must take into account the actions of its rivals in the price-setting process and do so in a manner compatible with the interests of its competitors to avoid any hostile reaction on their part. It follows that the market conduct of competitors will often be similar or parallel. [35] The pricing behavior of oligopolists increases the outward appearance of parallel conduct. As a result, in oligopolistic markets price elevation by one firm will usually be followed by a parallel price increase of another firm, and therefore prices in a market will be higher than expected under normal competitive conditions.[36] Usually, such supra-competitive prices can be achieved through explicit cartel coordination, but due to the specific conditions of oligopolistic markets, it is possible for this to arise through conscious parallelism.[37]

Thus, oligopolistic interdependence often causes a pattern of parallel pricing.[38] The economic consequences of such parallelism are the same as those of a price-fixing cartel.[39] Therefore, from the consumer's perspective, conscious parallelism is just as bad as cartel price-fixing[40] even if it lacks the element of *agreement* per se.

Contemporary economists also uniformly consider conscious parallelism just as harmful to the consumer as explicit price-fixing cartels [41] and advise that such oligopolistic parallelism such as tacit collusion ought to be treated in the same way as cartel conduct. [42] However, another theory explains that conscious parallelism might be a rational behavior of firms as a result of competition, especially in a market with a small

[35] Reza Dibadj, Conscious Parallelism Revisited. *San Diego Law Review* 47 (2010): 590.
[36] Massimo Motta *Competition policy: theory and practice*. Cambridge University Press, 2004: 138
[37] Ibid.
[38] Michael D Blechman, Conscious Parallelism, Signalling and Facilitating Devices: The Problem of Tacit Collusion Under the Antitrust Laws. *New York Law School Law Review* 24 (1978): 882.
[39] Ibid.
[40] Ibid., 68.
[41] Thomas A. Piraino Jr, Regulating Oligopoly Conduct under the Antitrust Laws. *Minnesota Law Review* 89 (2004): 22.
[42] W. T. Stanbury and G. B. Reschenthaler. Oligopoly and conscious parallelism: Theory, policy and the Canadian cases, *Osgoode Hall Law Journal* 15 (1977): 617, 688.

number of firms and homogenous products.[43] The controversy over the nature of tacit collusion and the way to separate lawful interdependent conduct from collusive is neither recent nor has it been resolved satisfactorily. A key factor in distinguishing between tacit collusion and oligopolistic inter-dependence is the presence of facilitating practices.

1.3.2. Facilitating practices vs. tacit collusion

As practice suggests, tacit collusion is difficult to occur without the assistance of facilitating practices, the use of which is, on its face, lawful under the competition laws. Oligopolistic firms understand that cartel formation is risky as it might attract the attention of regulators, which may result in detection and further penalization. On the other hand, facilitating practices enable firms to circumvent the law by 'legal' means.

Facilitating practices are typical for oligopolistic markets, where with the use of such practices firms can reduce market uncertainty and coordinate their price behavior.[44] For instance, it may include preannouncements of price changes, price reporting systems, meeting competition clauses, most-favored-customer clauses, delivered or basing-point pricing, and industry-wide resale price maintenance. Such facilitating practices make business transaction pricing more transparent and thus make it easier for firms to understand each other's price intentions without direct communication. In other words, facilitating practices refer to the actions of oligopolistic firms that assist in eradicating behavioral uncertainty among competitors and in reaching coordinative strategy more effectively which itself is not characterized as a cartel agreement. [45]

Nevertheless, facilitating practices may have procompetitive as well as anticompetitive effects depending on the circumstances in which they take place. For instance, an advance public price announcement, which on the one hand, may lower market uncertainty between oligopolistic firms, may, on the other, benefit customers by

[43] Glossary OECD.
[44] OECD, Facilitating practice in Oligopolies, 2007.
[45] OECD, Facilitating practices in Oligopolies, 2007:9.

providing them with necessary information. Public price announcements may take many forms of communication such as press releases or other media communications to inform the market about strategies, products, and developments concerning a firm.

Basically, public price announcements are recognized as unilateral disclosures, one-way communications, but not as 'exchanges of information.' However, a public announcement might also amount to an 'exchange of information,' if it is used as an invitation to collude or to indirectly signal intentions. Signaling can take place on the basis of an agreement or in the context of independent behavior. Companies can signal their willingness to collude by unilaterally increasing their prices. Other companies can then react by raising their prices as well, with the first price increase acting as a common orientation point. Such a strategy carries the risk that competitors will refrain from raising their own prices. In such a case, the firm incurs costs in the form of lost sales due to the unilateral price increase.

The case of *private* announcements is much more clear as they are directed to competitors only and therefore can always be recognized as invitations to collude. Conversely, *public* announcements, which are directed to both rival firms and consumers, may provide significant benefits to customers and therefore the issue of whether they are used as an invitation to collude would depend on how the communication is formulated.

As such, public price announcements present a unique enforcement question as they are considered to pertain to unilateral disclosures, but not to an *agreement* themselves. Further issues arise, however, where the firms each adopt the same facilitating practice without any express agreement: does parallel pricing together with the parallel adoption of facilitating practices allow a court to infer the presence of *agreement*? That is, the dilemma for the enforcement authority is that the parallel behavior which is witnessed when all the firms in an industry announce identical price changes within a short period of time may be a reflection of a formal conspiracy, or it may simply reflect a series of independent decisions in the market. For example, costs of materials may have risen for all firms in an industry, so all firms are aware that costs have risen and a price increase is necessary to maintain profitability. Therefore, when

one firm announces a price increase, and then all others follow it by raising their prices, no conspiracy in the legal sense has occurred. Each firm has made its own decisions, but it has done so in response to a common motivating factor. On the other hand, the process may only be a façade – a means by which to maintain supra-competitive prices using the announcement of increased costs as a coordinating device. Typically, there is no certainty as to the correct interpretation and as to how the policymaker should address this issue.[46] That is understandable as bright-line is difficult to establish.

Nevertheless, an analysis of certain factors such as the nature, content, method, and context of such disclosures may play a significant role in the identification of practices used for anticompetitive collusive purposes. Such evaluation of facilitating practices of such cases may only be fact-specific.

1.3.3. Algorithms and tacit collusion

Nowadays, in the digital economy, the analysis of large amounts of data (*big data*) are becoming increasingly important. Modern Information Technology (IT) technologies enable firms to use more innovative tools such as algorithms for pricing. The issue of price algorithms and its potential risk of infringement of competition law have attracted the attention of the international competition community in recent years. The topic is not well researched so far, and almost no cases exist on algorithmic collusions. One of the characteristics of price algorithms is that it is frequently deployed by firms operating in downstream markets rather than upstream.

From the perspective of firms, algorithms are useful to optimize prices and quantities, among other things. However, there are also concerns that the use of pricing algorithms can increase the risk of undesirable parallel pricing (tacit collusion), or, at the

[46] W. T. Stanbury and G. B. Reschenthaler, Oligopoly and Conscious Parallelism: Theory, Policy and the Canadian Cases. *Osgoode Hall Law Journal* 15.3 (1977): 627.

very least, algorithms could also be used to automate the signaling of an intention to collude.[47]

As mentioned earlier, one method with which firms can solve the coordination problem without communicating directly with each other is through signaling. Usually, a firm uses public price announcement practices for signaling, but price algorithms can replace this. The signaling of a willingness to collude can be carried out by corresponding programmed algorithms.[48] Other firms that also use algorithms can observe these signals and adjust their prices accordingly. Since algorithms allow this process to run much faster than before, the costs of signaling in the form of lost sales can be significantly reduced. Thus, the use of algorithms could lead more often to the signaling of a willingness to collude and thus ultimately to collusion itself.[49] Therefore, in this author's opinion, the use of price algorithms may be recognized as a type of facilitating practice to be considered within the general theory of facilitating practice as discussed in this dissertation.

1.4. Proof requirement

Facilitating practices are useful to determine whether the conduct in oligopolies may set the conditions for tacit collusion or whether it amounts to simple oligopolistic interdependence.[50] However, courts may not easily infer an agreement from the parallel adoption of facilitating practices given that such practices are considered to be unilateral conduct and that they may have a pro-competitive effect. Collusion requires proof of the existence of an anti-competitive agreement among firms. In other words, competition

[47] Excerpt from Chapter I of the XXII. Biennial Report of the Monopolies Commission ('Competition 2018') in accordance with Section 44 Paragraph 1 Sentence 1 of the German Act against Restraints of Competition Available at: http://www.monopolkommission.de/images/HG22/Main_Report_XXII_Algorithms_and_Collusion.pdf

[48] Ibid.

[49] Ibid.

[50] Jaime Eduardo Castro Maya, "The limitations on the punishability of tacit collusion in EU competition law", *Rev. Derecho Competencia. Bogotá (Colombia*), vol. 13 N° 13, (2017): 236-37. Available online at https://centrocedec.files.wordpress.com/2018/03/7-castro-195-2401.pdf

authorities must present evidence that goes beyond the possibility of independent or unilateral conduct.

Competition authorities utilize two distinct categories of evidence to prove the existence of collusion: namely, direct evidence [51] and circumstantial evidence. Unsurprisingly, competition authorities prefer direct evidence, but in most cases, such evidence is rarely available[52] as tacit collusion may occur without meetings, telephone calls, or any other direct contact or communication. [53] Furthermore, anti-cartel enforcement practice indicates that firms have learned to camouflage their collusive action scrupulously, therefore direct evidence often is unavailable.[54] Cartel participants are very skillful to conceal traces that may prove anti-competitive conduct. What is more, they often have no interest in cooperating with enforcers on an investigation unless they benefit from some leniency program. Therefore, even a good arsenal of investigative tools at the disposal of regulators may not be sufficient for the collection of direct evidence. In this context, reliance upon circumstantial (indirect) evidence to demonstrate the existence of collusion can be significant.[55]

[51] Direct evidence is such evidence that directly proves or disproves an alleged or disputed fact without resorting to any assumption or inference. Examples of direct evidence may include a copy of the actual agreement, a statement by a person who attended a cartel meeting, an internal company memorandum written to report the cartel meeting, notes of a telephone conversation, and/or a statement or testimony by a person who was approached by the cartel to join the agreement.

[52] Michael K. Vaska, Conscious Parallelism and Price Fixing: Defining the Boundary. *The University of Chicago Law Review* 52, no. 2 (1985): 508.

[53] Thomas A. Piraino Jr, Regulating Oligopoly Conduct under the Antitrust Laws. *Minnesota Law Review* 89 (2004): 30.

[54] Maurice Guerrin and Georgios Kyriazis. Cartels: proof and procedural issues. *Fordham International Law Journal* 16 (1992): 300.

[55] William E. Kovacic, The identification and proof of horizontal agreements under the antitrust laws, *Antitrust Bulletin* 38 (1993): 28.

1.4.1. Circumstantial evidence

Circumstantial evidence is such information that may it reasonable to infer collusion.[56] In general, a blend of evidence involving communication between firms and economic evidence of collusion is often referred to as *circumstantial evidence* by the courts.[57]

The use of circumstantial evidence is similar to the process of a jigsaw puzzle. The whole picture of collusion may emerge after each piece of circumstantial evidence is considered together rather than separately. Therefore, a holistic approach towards the use of circumstantial evidence is much preferable because only by putting together all circumstantial evidence may an inference of collusion be proper. [58]

Circumstantial evidence may sensibly be divided into two types. *Communication* evidence – i.e., evidence that indicates the existence of communication between cartel participants but does not define the content of their communications – [59] and *economic* evidence which mainly describes firm behavior, market characteristics etc.[60]

Economic evidence may further be considered to entail two categories of evidence: *conduct* and *structural* evidence. Conduct evidence includes, most importantly, evidence of parallel conduct, simultaneous price increases or identical bidding patterns in public tenders.[61] Structural economic evidence includes evidence of such factors as high market concentration and homogeneous products. Between these two types of economic

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[56] Organization for Economic Cooperation and Development, Prosecuting Cartels without Direct Evidence, 2006 (para 2.1).

[57] *See*, *e.g.*, Williamson Oil Co. v. Philip Morris USA, 346 F.3d 1287 (11th Cir. 2003); Blomkest Fertilizer, Inc. v. Potash Corp. of Saskatchewan, 203 F.3d 1028 (8th Cir. 2000); *In re* Baby Food Antitrust Litig., 166 F.3d 112 (3d Cir. 1999); Petruzzi's IGA Supermarkets, Inc. v. Darling- Delaware Co., 998 F.2d 1224 (3d Cir. 1993); Clamp-All Corp. v. Cast Iron Soil Pipe Inst., 851 F.2d 478 (1st Cir. 1988).

[58] Ibid., 18.

[59] Ibid., 20.

[60] Ibid., 20-21.

[61] William S. Comanor and Mark A. Schankerman, Identical bids and cartel behavior, *The Bell Journal of Economics* (1976): 281.

evidence, conduct evidence is considered the more important. There is criticism that economic analysis alone cannot demonstrate the exact significance of a commercial or industrial behavior in a specific market.[62] Careful economic analysis often points to justified behavior for some sort of collective market behavior such as price leadership or oligopolistic interdependence thereby conviction of firms for cartel behavior less likely or unjustified.[63] Nevertheless, economic evidence is viewed as ambiguous evidence as some courts have found it challenging to understand fundamental economic theories, and have expressly conceded that economics may be too complicated to be understood by courts.[64] Hence, there is divergence in court practice in dealing with economic analyses, and courts often reject the use of economic evidence to infer collusion.[65]

Communication evidence refers to whether firms met or otherwise communicated, but that does not describe the substance of their communications.[66] It includes records of telephone calls between competitors, but not their content, travel to a common destination, participation in a meeting, minutes of meetings that mention price or capacity but no agreement, internal documents that show knowledge of a competitor's pricing strategy and/or awareness of a future price increase by a rival. Communication evidence is generally considered to be the most probative of an agreement.[67] Analysis of cartel cases with significant employment of circumstantial evidence in advanced

[62] Maurice Guerrin and Georgios Kyriazis, Cartels: proof and procedural issues, *Fordham International Law Journal* 16 (1992): 312.

[63] Ibid., 312.

[64] OECD, Working Party No. 3 on Co-operation and Enforcement, Executive Summary of the Roundtable on Techniques for Presenting Complex Economic Theories to Judges, 19 February 2008: 2

[65] Ibid.

[66] Ibid., 10.

[67] Organization for Economic Cooperation and Development, Prosecuting Cartels without Direct Evidence, 2006:10.

jurisdictions suggests that evidence of interfirm communication was an essential component in almost all successful cases.[68]

Facilitating practices, including public statements, advance price announcements, predictions about industry demand or costs, and open discussions of various matters at trade associations meetings, can be highly probative of interfirm communication because they contribute to our understanding of how and what firms have done, and why.[69] Thus, facilitating practices may serve as essential communication evidence supporting an inference of collusion in a market.

The fundamental problem with circumstantial evidence is that there are no clear standards concerning the minimum quantum and forms of circumstantial evidence that will suffice to permit an inference of collusion.[70] As a result, courts often approach cartel allegations based on circumstantial evidence with skepticism. Courts have struggled to develop suitable evidentiary standards to distinguish tacit collusion from lawful oligopolistic interdependence, which is visible in *plus factors* analysis suggested by courts.

1.4.2. Plus factors

Taking into account the justification of oligopolistic interdependence, courts tend to be reluctant to consider conscious parallelism itself as sufficient evidence to establish collusion. Along with the fact of parallel pricing, courts often demand additional evidence, which may exclude the possibility that parallel pricing resulted from oligopolistic interdependency.[71] Such additional evidence is often referred to as *plus factor* in the literature.

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[68] OECD, Prosecuting cartels without direct evidence of agreement, June 2007: 5

[69] Louis Kaplow, Direct versus communications-based prohibitions on price fixing, *Journal of Legal Analysis* 3, no. 2 (2011): 466.

[70] William E. Kovacic, The identification and proof of horizontal agreements under the antitrust laws, *Antitrust Bulletin.* 38 (1993):18, 20.

[71] Michael K. Vaska, Conscious Parallelism and Price Fixing: Defining the Boundary, *The University of Chicago Law Review* 52, no. 2 (1985): 508.

Plus factors are defined as economic actions and outcomes, above and beyond parallel conduct by oligopolistic firms that are mostly inconsistent with unilateral conduct but largely consistent with explicitly coordinated action.[72] Arguably, plus factors help to distinguish between collusive and non-collusive pricing.

Courts have highlighted the following five plus-factors as helpful to identify collusion in a market:

a) *Action against self-interest*

It is the most cited plus-factor. It means that the action would be contrary to self-interest if undertaken independently, but would be in the interest of firms if undertaken jointly.[73] Evidence satisfying this requirement includes artificial standardization of products and raising prices in a time of oversupply.[74] Therefore, courts regard conduct contrary to independent self-interest as probative of conspiracy.[75] Nonetheless, the notion of *contrary to self-interest* is itself ambiguous. For instance, when a firm participates in a cartel, it may be acting against its short-term self-interest, since it could profit immediately by breaking with the group and increasing sales. On the other hand, in terms of long-term self-interest, the maintaining the higher price is in the interest of each firm. Thus, it is in the self-interest of firms to behave in a parallel manner even if this means sacrificing short-term profits in the hope of long-term supra-competitive pricing.[76] Moreover, some scholars argue that it is relatively easy to say that this plus

[72] Ibid., at 393.
[73] Milgram v. Loew's Inc., 192 F2d 579, 583 (3d Cir.1951).
[74] Organization for Economic Cooperation and Development, Prosecuting Cartels without Direct Evidence, 2006:176.
[75] Sigrid Stroux, *US and EC oligopoly control*. Kluwer Law International, 2004: 50.
[76] Page, William H. "Facilitating practices and concerted action under Section 1 of the Sherman Act." *Antitrust Law and Economics* 4 (2010):28.

factor is not present.[77] Consider, for example, a case in which each oligopolist is willing to maintain a higher price level only if its competitors all charge the same prices. Such behavior can be interdependent, but it also does not constitute an 'agreement.' The problem then is that a *contrary to a firm's self-interest* plus factor is not much of a reliable standard to infer collusion. Another criticism is that the concept of *action against self-interest* can merely constitute a restatement of interdependence.[78]

b) Motive to conspire

Several courts consider that motivation for collective action supports an inference of conspiracy from parallel behavior. A motive for conspiracy implies that the plaintiff must show that individual firms were in a position to benefit from specified concerted conduct. That is, there should be some indication that firms would have a disincentive to engage in the conduct unless others did the same.[79] However, some scholars argue that this plus factor has the same defect as the plus factor *acting against self-interest* and therefore that the element of *motive to collude* may be of little significance.[80] Furthermore, this plus factor has been criticized as unhelpful given that the intention of coordination is immaterial and impossible to prove.[81]

c) Factual plus factors

This plus factor mainly indicates the evidence of an opportunity for collusion. For instance, this plus factor includes evidence of interfirm communications, especially

[77] Michael D. Blechman, "Conscious Parallelism, Signalling and Facilitating Devices: The Problem of Tacit Collusion Under the Antitrust Laws." *New York Law School Law Review* 24 (1978):897.
[78] Ibid. See also Coleman v. Cannon Oil Company Citation (1993).
[79] Louis Kaplow, *Competition policy and price fixing*. Princeton University Press, 2013:112.
[80] Ernest Gellhorn, William Kovacic, and Stephen Calkins, *Antitrust law and economics in a nutshell*. West Academic, 2004: 282.
[81] Louis Kaplow, *Competition policy and price fixing*. Princeton University Press, 2013:113.

when quickly followed by simultaneous identical actions.[82] This plus factor also includes identical sealed bids with the similarity of language, terms, and conditions where such uniformity could not occur without collusion.[83] Several courts have held that meetings or other communications among conspirators, which show no more than a mere opportunity to conspire are insufficient to support an inference of conspiracy, at least where the defendants offer plausible and legitimate business justifications for the communications.[84]

d) Economic plus factors

Economic evidence can also be adduced by plaintiffs and acknowledged by courts to support conspiracy claims based on parallel behavior. Illustrative are a defendant's restriction of output, stable market shares, prices that fail to fluctuate with demand, high profit margins, data, and/or long-term patterns of price identity.[85] It should be noted that courts have differing approaches to the plus factor of parallel conduct together with high profit margins. Some courts were convinced to establish collusion,[86] while others decided that it was insufficient to infer a conspiracy.[87]

e) Facilitating practice as plus factors

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[82] Vaska, Michael K. "Conscious parallelism and price fixing: Defining the boundary." *The University of Chicago Law Review* 52, no. 2 (1985): 520.

[83] Sigrid Stroux, *US and EC oligopoly control*, Kluwer Law International, 2004:51

[84] Global Forum on Competition, ROUNDTABLE ON PROSECUTING CARTELS WITHOUT DIRECT EVIDENCE OF AGREEMENT, p. 5. Available at: http://www.oecd.org/daf/competition/prosecutionandlawenforcement/35892784.pdf

[85] Choe, Chang-Su. "Antitrust Economics for Proof of Concerted Price-Fixing: Practical Points for US and Korean Antitrust Jurisprudence." *International Law & Management. Review* 8 (2011):17.

[86] Estate of LeBaron v. Rohm Haas Co., 506. F.2d 1261 (9th Cir. 1974).

[87] United States v. Chas. Pfitzer & Co. 426 F.2d 32, 39 (1970).

Facilitating practices – including exchange of information and advance price announcements – can be considered as sufficient plus factors to infer cartel agreement if there is no business justification for such conduct. However, as mentioned previously, facilitating practices are not always anticompetitive.[88] It might concern a merely rational adaptation in an oligopolistic market. The question of whether specific facilitating practices have anticompetitive effects is challenging and, there are no clearly defined standards to make this distinction.

Antitrust tribunals generally adhere to the principle that the proffered evidence, including plus factors, should be weighed as a whole. Courts should not view each piece of evidence in a vacuum[89] or in isolation but instead each piece of evidence should serve as a tile in the mosaic of an overall plan or conspiracy.[90]

Professor Kovacic indicates the defect of the plus factor test is that the courts generally have not articulated a specific hierarchy of plus factors regarding their probative strength for inferring collusion.[91] There is no apparent justification in judicial decisions as to why specific plus factors have more evidentiary value than others.[92] In other words, there is no readily accepted principle, which determines what counts as a sufficient plus factor and what does not, or what combinations of plus factors might be sufficient.[93] Thus, courts appear to lack a clear methodology regarding the application of plus factors. Nonetheless, Professor Kaplow argues that many plus factors are merely

[88] Ibid., 10

[89] *See* Apex Oil Co. v. DiMauro, 822 F.2d 246, 254-55 (2nd Cir. 1987); *see also* Blomkest Fertilizer, Inc. v. Potash Corp. of Saskatchewan, 203 F.3d 1028, 1049 (8th Cir. 2000)

[90] *FMC Corp.*, 306 F. Supp. (1969), at 1135.

[91] William E. Kovacic et al., Plus Factors and Agreement in Antitrust Law, 110 *Michigan Law Review* 393 (2011):406.

[92] Ibid.

[93] Louis Kaplow, *Competition policy and price fixing*. Princeton University Press, 2013:111

alternative ways of describing oligopolistic interdependence.[94] He argues that plus factors establish that behavior is interdependent rather than purely independent. Consequently, current plus factor analysis described by courts seems to require enforcers to demonstrate the presence of interdependence between firms. But, when courts then find that such interdependence is insufficient, it is unclear what further alternative plus factors courts implicitly seem to demand.[95]

1.5. Concluding remarks

Hardcore cartel agreements are deemed to embody the most egregious infringement of competition law. The harmful effect of hardcore cartels conduct on economic efficiency and consumer welfare is well recognized, and therefore competition law treats cartels sternly by prohibiting them per se and by imposing severe sanctions. Due to the secret nature of cartels, their identification and ability to prove their presence is a challenging task for competition authorities given that they must identify the existence of an agreement between two and more entrepreneurs in order to prosecute cartel conduct. There should be a bargain between entrepreneurs, and that conduct should not be the outcome of collective action, not unilateral.

In particular, the identification of collusive agreement has become more problematic in oligopolistic markets, where entrepreneurs may use their mutual interdependence to coordinate market behavior. The theory of oligopoly shows that the oligopolistic market structure facilitates collusion among firms as to reach anticompetitive agreement in an oligopolistic market with a small number of firms is much easier than in other markets. Also, game theory proves that oligopolists are incentivized to maximize their profits via cartel arrangements. Furthermore, an

[94] Kaplow, Louis. "On the meaning of horizontal agreements in competition law." *California Law Review* (2011): 57.
[95] Ibid., 59.

oligopolistic environment presents opportunities for entrepreneurs to collude without express communication. Notably, this is visible in the example of parallel price movement, where oligopolists may consciously adapt their business practices based on what other firms are doing.

There is universal consensus that *explicit* collusion is illegal to conduct and is thus an infringement of competition law. Conversely, conduct resulting strictly from oligopolistic interdependence is most often not seen as an infringement of competition law. It is additionally undisputed that between *explicit* and *tacit* collusion there are circumstances in which firms engage in a range of practices that may assist them to lower strategic uncertainty and coordinate their price behavior in a more organized manner. These include all practices such as the exchange of information with rival firms as well as unilateral communications such as public price announcements, which ultimately may help to artificially increase market transparency. Nonetheless, whether unilateral disclosures of information resulting in price coordination – as opposed to reciprocal exchanges of information – should be condemned remains uncertain in competition law. This raises an enforcement dilemma on how to deal with such practices that do not amount to explicit collusion per se but that encourage tacit collusion.

Taking into account the fact that tacit collusion is usually driven by facilitating practices, a careful examination of these specific practices, their anticompetitive effects, and efficiencies, as well as their objectives or purposes can suffice for the inference of collusion. Firms may use the practice of public announcements as a signal to align their price strategies or as an invitation to collude. Drawing a distinction between purely unilateral conduct and signaling, which falls under coordinated conduct, is also a difficult task for competition enforcers.[96] Courts consider parallel behavior as insufficient to infer collusion per se and invariably require additional evidence – namely, the presence of plus

[96] Collusion and Unilateral Price Announcements Antonio Capobianco Senior Expert on Competition Law, OECD Competition Division.
https://www.competitionpolicyinternational.com/assets/Uploads/Cartel3-28-2013-1.pdf

factors. Nevertheless, the plus factor test has in practice proved to be less effective in distinguishing between mere oligopolistic interdependent conduct and a cartel.

In sum, Chapter I has introduced a general concept of collusion, and has highlighted relevant issues surrounding it. The next part of the dissertation seeks to provide an overview of the legal approaches on tacit collusion in three specific jurisdictions/regulatory areas: namely, the United States, European Union, and Japan.

Chapter 2. REGULATION OF TACIT COLLUSION IN ADVANCED JURISDICTIONS

Cartel regulation is a priority task for competition enforcers in the US, the EU, and Japan. All three jurisdictions treat cartels strictly. There are fewer differences at play in their legal approach towards tacit collusion, and therefore they also face similar challenges. This chapter explores the similarities, differences, and challenges in the regulation of tacit collusion in these three jurisdictions.

2.1. The United States

The US competition law regime is one of the oldest and most influential regimes in the world.[97] The US Sherman Act is one of the earliest competition laws that were adopted (namely, in 1890).[98] Therefore, the US competition law regime has a rich history and experience in the field of competition law. Anti-competitive agreements and collusions are prohibited by Section I of the Sherman Act, where hardcore cartels are treated as illegal in the US.[99]

The US position on the importance of an effective anti-cartel enforcement program has long been apparent. The US has long been the global leader in aggressively pursuing competition policy. The detection and prosecution of hardcore cartels have always been and remain a primary law enforcement priority. Furthermore, the sanctioning regime is

[97] Maher M. Dabbah, *International and comparative competition law,* Cambridge University Press, 2010:227.

[98] NB., competition law roots may be traced in Canada to *the Act for the Prevention and Suppression of Combinations in Restraint of Trade* enacted in 1889.

[99] Maher M. Dabbah,. *International and comparative competition law*, Cambridge University Press, 2010:241.

quite severe in the US. Along with substantial fines and treble damages in civil litigation, criminal penalties such as imprisonment are also possible with the US system.[100]

2.1.1. Regulation of tacit collusion under Section 1 of the Sherman Act

The term *cartel* is not defined in US law, regulations, or guidelines. Section 1 of the Sherman Act provides that:

> '[e]very contract, combination in the form of trust or otherwise, or conspiracy, in restraint of trade or commerce among the several States, or with foreign nations, is declared to be illegal.'

It is rare for courts to assign separate meanings to above three categories of offense in the definition of cartel conduct, and so the statute is usually paraphrased as prohibiting any *agreement* that is restrictive of trade.[101] That is, Section 1 of the Sherman Act requires a 'contract, combination or conspiracy,' which is often referred to simply as an 'agreement.'

US courts have continuously struggled to define the operative terms of 'contract, combination or conspiracy.' As shall be observed below, for more than a century since the Sherman Act came into force, courts have come up with various interpretations of 'agreement' to determine whether or not the challenged conduct is the outcome of a cartel arrangement.

The interpretation of 'agreement' in cases of oligopolistic interdependence is more uncertain in US competition law. Whether the concept of 'agreement' can be extended to tacit collusion is a controversial issue in the US. When the case involves a parallel

[100] The Antitrust Criminal Penalty Enhancement and Reform Act of 2004 significantly increased the maximum penalties for antitrust offenses. The Act has increased the maximum corporate fine from US$10 million to US$100 million, an individual fine up to US$1 million and raised the maximum jail sentence from three to ten years.

[101] John Duns, Arlen Duke, and Brendan Sweeney, eds. *Comparative Competition Law*. Edward Elgar Publishing, 2015:59.

price elevation in an oligopolistic market, recent US courts consider the next three possible explanations for such synchronic conduct: a) the conduct is independent, therefore there is neither harm nor violation; b) the conduct is interdependent, has resulted from oligopolistic interdependence, and therefore there is harm but apparently no violation; c) the conduct is more than just interdependent, therefore the circumstantial evidence must be capable of proving collusion.[102] Thus, oligopolistic interdependent parallel behavior does not constitute collusion even when there is clear harm.

A review of the relevant case law suggests that historically the legal attitude towards tacit collusion in US courts has not been certain and can be separated into two periods: 1) when conscious parallelism was equated to tacit collusion and thus to a cartel; and 2) when mere conscious parallelism, without the presence of additional supporting evidence, fails to constitute a cartel.

a) Conscious parallelism is equal to tacit collusion (1939-1954)

In the *Interstate Circuit v. the United States (1939)*[103] one witnesses an initial judicial attempt to define the main elements of cartel agreement. The case concerned eight distributors of movie exhibitors that had fixed the minimum prices charged for first-run films. In this case, the manager of *Interstate Circuit* had sent identically written proposal-letters to each of the eight distributors demanding they refuse to supply exhibitors that either refuse the schedule of minimum prices with first-run films. Then, each distributor responded to the proposal with an identical counter-offer. Taking these facts into account, the US Supreme Court stated that an explicit agreement is not

[102] John Duns, Arlen Duke, and Brendan Sweeney, eds. *Comparative Competition Law*. Edward Elgar Publishing, 2015:69.
[103] 306 U.S.208 (1939).

needed as it may be inferred by the 'adherence to a plan' and the 'acceptance of the proposed behavior'.

In *American Tobacco Co. v. United States (1946)*[104] three leading cigarette companies had maintained the same price list and discounts, and had raised prices even during the peak of the Great Depression when the demand for cigarettes had fallen. The Supreme Court concluded that 'no formal agreement is necessary to constitute an unlawful conspiracy,' but a unity of purpose or a universal design and understanding, or a meeting of minds and the absence of economic justification would be sufficient to infer collusion.[105]

The decision of the Supreme Court in *United States v. Paramount Pictures (1948)*[106] almost repeated the *American Tobacco* ruling and further expanded the scope of cartel conduct. In this case, five companies specified the same minimum prices in licenses, used the same clearances, applied the same practices and imposed identical terms concerning a variety of complex matters. Taking into consideration these findings, the Court stated that no express agreement is necessary to find a conspiracy, but it is sufficient that a concert of action is present.[107] Thus, courts broadly interpreted the definition of cartel conduct, so as to equate conscious parallelism to collusion.[108]

b) Mere conscious parallelism is insufficient for collusion (since 1954)

The *Theatre Enterprise v. Paramount Film Distributing Corp.,* (1954)[109] ruling was a turning point in legal efforts to determine what constitutes cartel conduct, which

[104] 328 U.S. 781 (1946).
[105] Ibid., 810.
[106] 334 U.S. 131 (1948).
[107] Ibid., 142.
[108] Michael D. Blechman, Conscious Parallelism, Signaling and Facilitating Devices: The Problem of Tacit Collusion Under the Antitrust Laws, *New York Law School Law Review* 24 (1978): 882-885
[109] 346 U.S. 537 (1954).

largely narrowed the definition of collusion propounded in previous cases. In this case, movie distributors restricted in parallel 'first-run' dates for local theaters. The Supreme Court has ruled that the restrictions were reasonable steps for each firm, regardless of whether rivals followed suit[110] and therefore the mere parallel behavior of firms is insufficient to infer collusion. The Court stated that 'conscious parallelism has not yet read conspiracy out of the Sherman Act entirely.'[111] This ruling caused a heated debate between the Harvard and Chicago law schools. Harvard scholar Turner[112] supported the Court's decision, while Chicago scholar Posner disagreed with the limitation of the scope of Section 1 that complicates its application to tacit collusion.[113] Thus, the *Theatre Enterprise* case made clear that it is not sufficient to establish mere 'conscious parallelism' or 'oligopolistic interdependence' for an agreement to be inferred.

Then, in *Matsushita Electric Industrial Co. v. Zenith Radio Corp. (1986),* the US Supreme Court established the modern standard of proof to determine the existence of concerted action with the power of circumstantial evidence. The court held that 'the correct standard is that there must be *evidence that tends to exclude the possibility of independent action by the defendants*. That is, there must be direct or circumstantial evidence that reasonably tends to prove that the defendants have *a conscious commitment to a common scheme designed to achieve an unlawful objective*'.[114]

In the last two cases – namely *Brooke Group (1993)*[115] *and Wallace Bank of Bartlett (1995)*[116] – the Supreme Court has clearly stated that conscious parallelism in

[110] Ibid., 539-540.
[111] Ibid., 541.
[112] Carl Kaysen, *Antitrust policy: an economic and legal analysis [by] Carl Kaysen and Donald F. Turner*. Cambridge: Harvard University Press., 1959:108-109
[113] Richard A. Posner, Oligopoly and the antitrust laws: A suggested approach, *Stanford Law Review* (1969): 1584.
[114] *Matsushita Electric Industrial Co. v. Zenith Radio Corp.*, 475 U.S. 574, 597-98 (1986); S*ee also Monsanto Co. v. Spray-Rite Service Corp.*, 465 U.S. 752, 764 (1984).
[115] *Brooke Group Ltd. v. Brown & Williamson Tobacco Corp.* 133 S. Ct. 2578 (1993).

itself is not unlawful as parallel behavior can merely be the outcome of natural, interdependent behavior. In order to infer collusion based on the fact of conscious parallelism, the Courts would require additional evidence, which they have described as *plus-factors*. Thus, the US has been starting to apply 'parallelism plus' standard, which implies that more than mere 'conscious parallelism' or interdependent behavior' must be established to infer an agreement. As described in Chapter I, this requirement for additional factors pertains to facilitating practices that may be present. In particular, the public price announcement practice can easily facilitate collusion if it is used to signal or as an invitation to collude.

2.1.2. Facilitating practice vs. tacit collusion

In principle, under US antitrust law, a unilateral disclosure of information does not violate Section 1 of the Sherman Act. This is because unilateral conduct does not constitute the *agreement* required to establish an infringement of Section 1.[117] Cases where anti-competitive unilateral disclosure of information is also present usually are subject to the consideration under Section 5[118] of the Federal Trade Commission Act or Section 2[119] of the Sherman Act. Nonetheless, there is an exception, according to which in certain circumstances, unilateral price disclosures can facilitate collusion among firms and this can be considered an infringement of Section 1.[120]

The DOJ most frequently has pursued signaling conduct under Section 1, which prohibits '[e]very contract, combination . . . or conspiracy' in unreasonable restraint of trade. To prove a Section 1 violation, a plaintiff must show the existence of an

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[116] 55 F. 3d 1166,1168 (6th Cir.1995)

[117] OECD, Unilateral Disclosure of Information with Anticompetitive Effects 2012: 172.

[118] Section 5 of the Federal Trade Commission Act prohibits unfair methods of competition.

[119] Section 2 of the Sherman Act prohibits efforts to monopolize, or attempts to monopolize, including acts to combine or conspire with another person to monopolize.

[120] OECD, Unilateral Disclosure of Information with Anticompetitive Effects 2012: 175.

agreement that unreasonably restrains trade, and that affects interstate commerce.[121] Like any contract, proving that a Section 1 *agreement* exists often requires showing both the presence of an *offer* and *acceptance* by a competitor. In a typical Section 1 signaling case, a plaintiff uses the *signal* as evidence an offer was made and then relies upon subsequent statements or conduct by a competitor to show *acceptance* of the offer.[122]

A Section 1 challenge to signaling presents two hurdles for the plaintiff. The first is determining that a public statement was an actual offer to enter into an anti-competitive agreement. Almost all companies make public statements or engage in some public chatter that likely is reviewed by competitors, whether at trade association meetings, investor presentations, and even through pricing activities. Most of these statements or activities are part of the company's legitimate, ordinary business activities. Companies describe their capabilities to customers, announce price changes, and inform investors of plans and financial results. [123] For a Section 1 claim to prevail, the plaintiff and later the factfinder must sift through this overwhelming volume of routine communications to discern a clear *signal* that cannot be reconciled with legitimate business conduct.

Several courts have dismissed Section 1 claims where the alleged *signaling* had been ambiguous. For example, in *Hall v. United Air Lines,* a putative class of travel agent plaintiffs alleged that several US airlines conspired to cut or eliminate travel agent commissions through signaling.[124] Plaintiffs pointed to a series of trade press articles, trade interviews, and letters to trade publications as signals among airlines to eliminate commissions. The court rejected the allegation these statements were *signals* sufficient to support a claim under Section 1, noting the airlines had legitimate purposes for the communications that were "sufficient to rebut any implication that the letters were an

[121] Standard Oil, 221 U.S. at 58.
[122] E.g., In re Delta/AirTran Baggage Fee Antitrust Litig., 733 F. Supp. 2d 1348, 1352 (N.D. Ga. 2010).
[123] See, e.g., id. at 1362.
[124] 296 F. Supp. 2d 652.

attempt to communicate with competitors." Without an *offer* there could be no Section 1 agreement.

The second hurdle for Section 1 plaintiffs are finding evidence of a competitor's *acceptance*. If a competitor does not respond to a signal, there is no Section 1 liability because there is no *agreement*.[125] For example, in *United States v. American Airlines,*[126] a federal district court rejected the DOJ's attempt to hold American Airlines liable under Section 1 for unilateral statements by its then-CEO. In what today would be labeled an *invitation to collude*, the CEO suggested to his counterpart at Braniff Airways that both carriers should raise prices by 20 percent. Braniff's president not only declined but reported the conversation to the DOJ. In the DOJ challenge to this conduct, under both Sections 1 and 2, the district court rejected the Section 1 claim given that Section 1 only prohibits actual agreements among competitors; "it does not reach attempts."[127]

Most signals are less explicit. For example, the Hall plaintiffs alleged signals made in news interviews and correspondence with trade publications. The DOJ's ongoing airline investigation apparently was triggered by public statements on the part of executives on 'capacity discipline'. In such cases, it is hard to determine with confidence that there was a signal or offer to discern whether recipients 'accepted' a signaled offer or just made parallel actions backed by independent business justifications. As the Supreme Court has recognized, leader/follower behavior and 'conscious parallelism' are bona fide competitive interaction and do not alone violate Section 1. Showing acceptance to a signal requires something more than similar conduct; it requires demonstrating such conduct that cannot be justified or explained as independent.

The district court in *Delta/AirTran Baggage Fee* grappled with these issues in deciding in favor of the defendant airlines' motion to dismiss. The putative class of passenger plaintiffs claimed Delta and AirTran conspired, through public signals on

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[125] Copperweld Corp. v. Indep. Tube Corp., 467 U.S. 752, 768 (1984).

[126] 743 F.2d 1114.

[127] United States v. Am. Airlines Inc., 570 F. Supp. 654, 657 (N.D. Tex. 1983), reviewed on other grounds, 743 F.2d at 1119 where the court had stated that noting "our decision that the government has stated a [Section 2] claim does not add attempt to violations of Section 1 of the Sherman Act").

earnings calls and at industry conferences, to implement the first-bag fee and reduce capacity on routes in and out of Hartsfield-Jackson Atlanta International Airport. While the court declined to dismiss the plaintiffs' Section 1 claims, it noted the difficulties these plaintiffs will face in proving an agreement due to Delta's "potentially legitimate and lawful justifications" for imposing a first-bag fee following its merger with Northwest Airlines, which already had implemented a fee. The court also noted that the airlines might have cut capacity due to the "uncertain economic climate" in 2008 and not because of any anti-competitive motivation, which would "provide Defendants a viable defense" to plaintiffs' claims. Thus, even if the plaintiffs could show a signal, the defendants potentially could escape liability if they can demonstrate legitimate business justifications for their subsequent behavior. These two critical issues demonstrate that Section 1 is ill-suited to asserting antitrust liability based upon unilateral signaling conduct. Even if there is an explicit 'offer' via signaling conduct, there can be no Section 1 liability if a competitor does not 'accept'. Section 1 does not prohibit unilateral behavior, so the unilateral act of sending a signal cannot itself violate Section 1.

In sum, antitrust challenges to invitations to collude and other 'signaling' communications are on the increase. In the last several years, both US antitrust agencies have launched extensive investigations, and the US Federal Trade Commission (FTC) has obtained consent decrees in multiple actions arising from unilateral statements by business executives. Nonetheless, courts have refused to find that a unilateral statement by a competitor, without additional evidence, can provide the basis to infer an 'agreement' for the purposes of Section 1 of the Sherman Act. Courts have, almost invariably, rejected claims that signaling can support a monopolization claim under Sherman Act Section 2. And the federal courts have not substantiated the FTC's challenge to signaling under the FTC Act Section 5. Despite this questionable statutory authority, the DOJ and FTC continue to pursue such unilateral conduct.

2.2. The European Union

Competition law and policy play a significant role in ensuring market unity and the promotion of economic development in the EU. The legal foundation for EU competition law is to be found in the Treaty of Rome in 1957. The European Commission, supported by the European courts, has further developed the framework for competition policy in the EU.

In the early 1980s, the EU's approach began to vary and to become progressively 'American' in its unsentimental approach towards cartels.[128] Furthermore, following the US's successful experience, the EU has implemented its first leniency program[129] in 1996 and effectively amended the program in 2006, which significantly developed anti-cartel enforcement. The program has proven crucial to uncovering cartels in the EU, with the majority of cases in recent years stemming from evidence obtained from a leniency applicant. Unlike the US model, the EU leniency program is not backed by the threat of criminal sanctions, but the EU has significantly increased its penalties for cartel offenses in recent years to the extent that the EU Advocate-General has called them quasi-criminal.[130]

Hardcore cartels are also considered to be the most severe infringements of competition rules at national level within EU Member States. The European Commission's leniency notice considers hardcore cartels to be the most severe

[128] John Duns, Arlen Duke, and Brendan Sweeney, eds. *Comparative competition law*. Edward Elgar Publishing, 2015: 309.

[129] The EU leniency program has a different structure of exemption and reduction from fines. First, unlike the US's program, the EU leniency program grants not only exemption but also reduction of fines for further applicants. The maximum number of eligible applicants for reduction is up to four. Second, the EU leniency program does not provide a fixed percentage of fines, which is subject to reduction.

[130] Ibid.

restrictions of competition in the EU market, which ultimately result in increased prices and reduced choice for the consumer. [131]

The European Commission can only impose an administrative fine of up to 10 % of the annual (group) turnover[132] on the 'undertakings' (i.e., the firms) participating in the cartel. Infringements of Article 101(1) of the Treaty on Functioning of the European Union (hereafter, referred as TFEU) are not of a criminal law nature. Nevertheless, some EU Member States may also criminally prosecute individuals participating in a cartel based on their national regulatory regimes. Even though the EU authorities are still unable to impose prison terms or fines on individuals for antitrust violations, they have become much more aggressive in anti-cartel enforcement, and there is currently some debate as to the advisability of adding a criminal law component to EU competition policy.[133]

The TFEU prohibits cartel conduct in Article 101 (1). Article 101(3) TFEU provides exemptions to certain restrictive agreements, decisions or concerted practices fulfilling specific criteria. However, hardcore cartel agreements are most unlikely to fall within the exempting criteria of Article 101(3) TFEU. Hardcore cartels are regarded as a *per se* restriction of competition within the meaning of Article 101(1) TFEU. As these are restrictions 'by object' it is not necessary to prove the anti-competitive effects of a cartel.

2.2.1. Regulation of tacit collusion in the EU

The prohibition of cartels and other agreements that could disrupt free competition in the EU internal market is stipulated in Article 101 of the TFEU. Article 101 reads,

[131] The Commission Notice on Immunity from fines and reduction of fines in cartel cases ('the Leniency Notice'), Official Journal C 298 of 8 December 2006, pages 17-22.
[132] Article 23(5) of Council Regulation (EC) No 1/2003.
[133] Ibid.

> "The following shall be prohibited as incompatible with the internal market all agreements between undertakings, decisions by associations of undertakings and concerted practices which may affect trade between the Member States and which have as their object or effect the prevention, restriction or distortion of competition within the internal market."

Article 101 applies three forms of coordination: *agreements between undertakings*, *decisions by associations of undertakings* and *concerted practices*.[134] In general, EU competition law applies two separate notions to define cartel conduct: 'agreement' and 'concerted practice.' Nonetheless, it should be noted here that neither the term 'concerted practice' nor 'agreement' are defined in the TFEU.

Unlike US antitrust law, the EU separately uses the term 'concerted practice' in addition to the 'agreement' within the scope of Article 101. At first glance, the US and EU approaches might diverge. However, the US defines 'agreement' very broadly, therefore special provision for 'concerted practice' is unnecessary, whereas the EU defines 'agreement' somewhat legalistic.[135] The law as it applies in the EU seems to suggest that there is not much legal difference in the meaning of 'agreement' and 'concerted practice', as 'concerted practices' are considered forms of collusion that fall short of an 'agreement'[136].

The notion of 'agreement' in EU competition law is very similar to the notion of 'agreement' in US antitrust law. An agreement is found when parties express their joint intention to act on the market in a specific manner. Additionally, the form of expression is unimportant – whether it is formally written, or oral, or in any other forms of

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[134] 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 natural persons, such as 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) for, among other things, a discussion on Article 81's approach to a firm with a dominant position in a market.

[135] Terry Calvani, Book Review: The Boundaries of EC Competition Law: The Scope of Article 81, (2006): 1023-1032.

[136] The Anti-Monopoly Act, art. 2(6).

communication – as long as it constitutes a faithful expression of the parties' intention. Thus, the concept of 'agreement' sufficiently implies a *concurrence of wills* between at least two parties.[137] This broad and liberal definition of the agreement allows the application of Article 101 TFEU (Treaty on the Functioning of the European Union) to loosely formalized forms of cooperation, and it enables the EU Commission and courts to 'close the net' on a variety of expressions of consensus that go beyond written contracts.

On the other hand, the notion of 'concerted practice' is problematic in the EU as there is debate as to whether the term 'concerted practice' covers tacit collusion, given that there is no provision expressly addressing tacit collusion in the TFEU. A crucial issue is whether specific parallel price increases in oligopolistic markets may be considered concerted practices.

When Article 101 had been drafted, lawmakers were familiar with the problem of tacit collusion that had emerged in the US courts. Therefore, during the negotiation of the TFEU, it was well known to EU lawmakers that parallelism or tacit collusion might also raise similar complex antitrust issues for EU antitrust authorities.[138] Therefore, it is reasonable to consider, that the term 'concerted practice' was included intentionally along with 'agreements' specifically to cover all forms of coordination, including tacit collusion. Nevertheless, due to the considerable influence of US antitrust law on EU competition law, the practical application of 'concerted practice' in the EU has gone in the same way as in the US.

An early attempt to define the notion of 'concerted practice' in EU law was in the *Dyestuffs* case in 1972.[139] The Court defined 'concerted practice' as a form of

[137] See, *Bayer* v. *Commission, (*Case T-41 /96, 2000 E.C.R. 11-3383, para. 69.)

[138] Marilena Filippelli, *Collective Dominance and Collusion: Parallelism in EU and US Competition Law*. Edward Elgar Publishing, 2013:76.

[139] Case 48/69, ICIV. Comm'n, 1972 E.C.R. 619, 669.

coordination between firms that, without having reached the stage where an agreement has been concluded, knowingly substitutes practical cooperation between firms for the risks of competition.[140] Subsequently, the Court has noted that a concerted practice needs not have all the elements of a *contract,* however, concerted practice may arise out of coordination which becomes obvious from the firms' behavior in the market.[141] Considering the evidential value of 'parallel behavior', the court stated that parallel behavior might not in itself be identified with concerted practice, but may provide circumstantial evidence.[142] In other words, the Court indicated that parallel behavior would not be equivalent to concerted practice but may be one of the elements used to prove its existence.

A few years later, in this *Suiker Unie* V. *Commission (1975)* case[143] the court ruled that it was not necessary for the firms to behave based on a plan to come within the scope of collusion. It was recognized that any direct or indirect contact between operators influencing the behavior of firms would be sufficient. Similarly, the decision of the Court in *Suiker Unie (1975),* clarified that the Court was prepared to accept that intelligent adaptation to the existing and anticipated conduct of competitors in the oligopolistic market was legitimate[144] and therefore that parallel behavior in an oligopoly would not in and of itself constitute collusion (i.e., 'concerted practice'). The decisions in *Dyestuffs* and *Suiker Unie* appear to give rise to a notion of 'concerted practice' that requires two elements: the *existence of direct or indirect reciprocal contact* between undertakings aimed at knowingly removing uncertainty as to future market behavior, and then *subsequent behavior* in the market under that concertation. In these cases, the ECJ insists that each firm should determine independently the policy which it intends to adopt on the common market. This obligation strictly prohibits any direct or indirect

[140] Ibid, at para. 64.
[141] Ibid. at para. 65.
[142] Re Cartel in Aniline Dyes, *supra* note 46, at paras. 7-10 of the decision.
[143] Joined Cases 40-48,50,54-56, 111, 113 & 114/73,1975 E.C.R. 1663.
[144] Joined Gases 40-48,50, 54-56, 111, 113 & 114/73.

communication between firms, the object or effect whereof is either to influence the behavior on the market of rivals, to disclose to other firms the course of conduct which they themselves have decided to adopt or contemplate adopting on the market.[145] Thus, the only way for firms to escape the application of Article 101 is to demonstrate to the Court that they had reached their market decisions independently and without prior knowledge of the strategies and plans of their competitors.[146]

Then, in *CRAM and Rheinzink* v. *Commission (1985),*[147] the court precisely demonstrated that the EU Commission has to provide clear proof that parallel conduct is the result of coordinated action between firms, and therefore reliance on parallelism alone to infer collusion is impermissible.[148]

In *Woodpulp (1993),*[149] the Court clarified that 'parallel conduct cannot be regarded as furnishing proof of collusion unless concertation constitutes the only plausible explanation for such conduct.[150] That is, the Court stated that concerted practice could only be inferred from parallelism of behavior if the concertation is the only explanation for it.[151] Also, relying upon expert testimony on oligopolistic market structure, the ECJ ruled 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."[152] In other words, the Court has indicated that oligopolistic interdependence may serve as a plausible explanation for the parallelism in an oligopoly, and therefore the exclusion of conscious parallelism from the scope of Article 101. The ECJ had appointed a group of economic experts to check the market conditions. After the experts' examination, the court concluded that market

[145] ECJ, Judgment of 16 December 1975, 40/73 – Suiker Unie, ECR 1975, p. 1663.
[146] Joined Cases 40-48,50,54-56, 111, 113 & 114/73,1975 E.C.R. 1663, at 850.
[147] Gases G-29-30/83,1 G.M.L.R. 688 (1985).
[148] Albertina Albors-Llorens, Horizontal agreements and concerted practices in EC competition law: Unlawful and legitimate contacts between competitors. *The Antitrust Bulletin* 51, no. 4 (2006): 855
[149] Joined cases C-89,104, 114, 116-117, 125-129/85.
[150] Sigrid Stroux, *US and EC oligopoly control*. Vol. 14. Kluwer Law International, 2004: 77
[151] Ibid., at 80.
[152] Ibid.

characteristics in that period were a plausible explanation for the price uniformity than concertation.[153] Nonetheless, the experts did not mention that such market characteristics were the sole plausible explanation for the price uniformity. Thus, it was sufficient for the ECJ that there were alternative explanations apart from collusion.

With respect to the relationship between the notions of 'agreement' and 'concerted practice' in EU competition law, Professor Odudu[154] has stated the following:

> "Since concerted practice is included to capture conduct not already caught by "agreement," and since agreement catches common intention, there must be something distinctive about common intention in concerted practice. An idea underlying some cases and commentary is that common intention in the agreement is expressed in a manner that gives rise to (legal) obligation, where common intention in concerted practice is not so expressed".

Professor Odudu suggests a broader reading of 'concerted practices.' He argues that 'concerted practice' adds nothing to the notion of 'agreement' if it does not reach unilateral behavior in the form of conscious parallelism.

2.2.2. Facilitating practice vs. tacit collusion

As mentioned previously, anti-competitive concerns may arise with regard to unilateral advance public price announcements of future prices or the disclosure of sensitive information. According to the European Commission's *Guidelines on Horizontal Agreements*, it is a general principle that when a firm makes a genuine public announcement, there is no violation of Article 101(1). However, the Guidelines stipulate two exceptions to this principle: a) public price announcements that constitute an

[153] Joined Cases C-89/85, C-104/85, C-114/85, C-116/85, C-117/85 and C-125/85 to C-129/85 A. Ahlström Osakeyhtiö e.a. (Woodpulp II) [1993] ECR I-1307, para. 75.

[154] Terry Calvani,.Book Review: The Boundaries of EC Competition Law: The Scope of Article 81. *The Antitrust Bulletin,* Vol 51, Issue 4, (2006): 1023-1032.

"invitation to collude"; b) unilateral announcements that would help firms reach a common understanding of coordination: [155]

> "[…] the possibility of finding a concerted practice cannot be excluded, for example in a situation where such an announcement was followed by public announcements by other competitors, not least because strategic responses of competitors to each other's public announcements (which, to take one instance, might involve readjustments of their own earlier announcements to announcements made by competitors) could prove to be a strategy for reaching a common understanding about the terms of coordination."

In other words, the guidelines state that when a firm makes a unilateral public price announcement, this does not constitute collusive conduct within the meaning of Article 101(1). Nevertheless, depending on the facts, the possibility of finding concerted practice (tacit collusion) cannot be excluded in a situation where such an announcement was followed by public announcements by other firms, not least because of strategic responses of competitors to each other's public announcements.

Nonetheless, due to a shortage of case law on price signaling, the circumstances under which price signaling becomes an unlawful anti-competitive practice are still unclear. This shortage can be explained by the fact that the majority of firms subject to a price signaling investigation have opted for behavioral commitment decisions, rather than litigate and thus risk an often significant administrative surcharge. A recent example can be the container liner shipping investigation by the European Commission. In this case, the European Commission had concerns that the container liner shipping companies' practice of announcing their future price intentions to increase their prices may harm competition. These announcements, known as 'General Rate Increases' or 'GRI announcements' only indicated the increase in US dollars per transported container unit (as an amount or percentage of the change), the affected trade routes, and the

[155] Raphaël De Coninck, "Information Exchanges and Price Signaling: An Economic Perspective". Bruylant, (2016). Available at: http://www.crai.com/sites/default/files/publications/Information-Exchanges-and-Price-Signaling-An-Economic-Perspective.pdf

planned date of implementation. The GRI announcements were generally made three to five weeks before their implementation, and during that period other container liner shipping companies would announce similar increases. The European Commission's concern was that the GRI announcements might not provide full information on the new prices to customers but merely allowed them to explore each other's pricing intentions and subsequently coordinate their behavior. As a result of the case, the European Commission ordered the container liner shipping companies to stop publishing the GRI announcements in their then-current form. Also, in order for customers to understand, the announcements ought to become more transparent and ought to include at least the five main elements of the total price such as the base rate, bunker charges, security charges, terminal handling charges, and peak season charges. Furthermore, any future announcement shall be binding on the carriers as a maximum price and will not be made more than 31 days before its entry into force. In the case when a firm breaks one of these rules, the European Commission may impose a fine of up to 10 percent of the company's worldwide turnover, without having to find a competition law infringement.[156] For their part, the 15 container liner shipping companies have also offered commitments in order to address the European Commission's concerns relating to concerted practice through price signaling.

[156] https://www.dlapiper.com/en/uk/insights/publications/2016/07/antitrust-matters-july-2016/signalling-conclusion/

2.3. Japan

Japan adopted its competition law under the unilateral influence of the US as part of the economic liberalization in 1947. Officially, the law is titled 'Act on Prohibition of Private Monopolization and Maintenance of Fair Trade', which is also commonly known as the 'Japanese Antimonopoly Act' (hereinafter, the 'JAMA'). The initial draft of the JAMA was modeled after the US antitrust laws, and, as enacted, it was stricter than US antitrust laws. However, due to cultural, social and economic differences, the law has been amended which has resulted in the current JAMA being significantly different to US antitrust law. These differences have led to different competitive environments.[157]

In Japan, cartel practices are a complicated issue given that horizontal coordination has often been rooted in the traditional business practices of Japanese companies.[158] In particular, bid rigging – especially in the construction sector – has historically been a crucial area of cartel control in Japan. Bid rigging was regarded as a proper practice to prevent bankruptcy, maintain employment and avoid 'dumping' in the form of cut-rate service and defective construction before World War II.[159] Even after Japan's Criminal Code criminalized bid rigging in 1940, the idea that collusive bidding was illegal has not been fully espoused in societal norms.[160] The dissolution of the super-conglomerate *zaibatsu* groups in the post-war period was ironically one of the reasons that cartels of suppliers in Japan became active. It created stiff competition among suppliers, who then

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[157] Hiroshi Iyori, A Comparision of US-Japan Antitrust Law: Looking at the International Harmonization of Competition Law. *Pacific Rim Law & Policy Journal* 4 (1995): 90.

[158] Etsuko Kameoka, *Competition Law and Policy in Japan and the EU*. Edward Elgar Publishing, 2014: 37

[159] Ibid., at 38.

[160] Kameoka, Etsuko. *Competition Law and Policy in Japan and the EU*. Edward Elgar Publishing, 2014:38.

resorted to cartel conduct since they could no longer benefit from the stable demand of producers belonging to the *zaibatsu.* [161]

The surcharge system has been introduced after the first oil crisis as a response to consumer complaints about the number of cartels being formed. [162] Until this introduction of the administrative surcharge, it had been impossible to recover from enterprises the extra profits they had gained using unlawful price cartels. [163] The current administrative surcharges are up to 10% of the total sales of product at issue from the previous three years. [164] In addition to administrative sanctions, firms and individuals could face criminal sanctions for cartel violations. [165] The criminal penalty is imprisonment up to five years or a fine of up to five million yen in case of individuals and a fine up to five thousand million yen in case of firms. [166] If, following investigation, the Japan Fair Trade Commission (the 'JFTC') determines that a case is egregious and has a significant effect on people's lives, or that the administrative remedies are not sufficient, it may file for a criminal prosecution by the Prosecutor General.

The JFTC is the government agency responsible for enforcing the JAMA and may impose *cease-and-desist* orders and administrative fines (known as 'surcharges') on firms that it finds to have engaged in cartel conduct. [167] For decades, enforcement of the law had been lax and, as a result, the Antimonopoly Act did not feature much in Japanese society. [168] Cartel investigations became more active since the 1960s due to

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[161] Etsuko Kameoka, *Competition Law and Policy in Japan and the EU*, Edward Elgar Publishing, 2014: 39.

[162] Mitsuo Matsushita, International trade and competition law in Japan, *OUP Catalogue* (1993).

[163] Edward M. Graham and J. David Richardson. *Global competition policy*. Peterson Institute, 1997.154.

[164] Article 7 and 7-2 (Chapter II) of the JAMA,

[165] Paragraph 1, Article 96 of the JAMA.

[166] Item 1, paragraph 1, Art. 89 and item 1, paragraph 1, Article 95 of the JAMA.

[167] Article 3 of the JAMA.

[168] Simon Walle, A W Vande and Masako Wakui, "Antimonopoly Law: Competition Law and Policy in Japan." *Zeitschrift für Japanisches Recht* 15, no. 29 (2010): 289.

price-fixing cartels and other illegal activities that were contributing to a rise in consumer prices facilitated by tight oligopolistic market structures.[169] Since 2006, anti-cartel enforcement has become more effective thanks to enhancing the JFTC's investigative powers and the introduction of a leniency program. The leniency system has become one of the primary drivers of the Japanese cartel enforcement system, and indeed, today the JFTC considers the leniency system as a critical investigative tool.

2.3.1. Regulation of tacit collusion in Japan

Cartels are referred to as an unreasonable restraint on trade in Japan.[170] JAMA prohibits cartels by Article 3, and the definition of cartel conduct is stipulated in Article 2 (6), which defines it as follows:

> "[…]business activities, by which any enterprise, by contract, agreement or any other means irrespective of its name, in concert with other enterprises, mutually restrict or conduct their business activities[…], facilities or counterparties, thereby causing, contrary to the public interest, a substantial restraint of competition in any particular field of trade."

With respect to the prohibited act, it is generally called 'Kyodo-Koi' (共同行為 in Japanese), which means 'concerted activity.' The terms 'contract' and 'agreement' are simply the projection of the practice into reality but do not bear any significance to the classification of the conduct. The JAMA does not distinguish between agreements and concerted practices as is the case with the EU.

Nonetheless, similar to EU competition law, the JAMA is deemed to cover the notions of 'agreement' and 'concerted practice.' Japanese competition law has been designed to also regulate such coordinative behavior on the part of firms beyond behavior that pertains to their explicit agreement. In other words, the cartel definition in

[169] Etsuko Kameoka, *Competition Law and Policy in Japan and the EU*. Edward Elgar Publishing, 2014: 39.

[170] Douglas E. Rosenthal & Mitsuo Matsushita, *Competition in Japan and the West: Can the Approaches be Reconciled? in* Global Competition Policy 318: 170-72.

the JAMA includes conscious parallelism.[171] For instance, Professor Negishi, an eminent Japanese competition law expert, argues that the definition of cartel conduct in the JAMA has the term Kyodo-Suiko' (共同遂行 in Japanese), which actually implies concertation as a result of independent actions of entrepreneurs, and also thoroughly covers the notion of conscious parallel behavior.[172] Therefore, this term also fits conduct such as unilateral price disclosure.

However, due to the influence of US antitrust law, Japan also has taken a conservative legal approach towards the conscious parallelism phenomenon. As a consequence, Japan makes 'Sogo-Kosoku' (相互拘束 in Japanese) (i.e., 'mutual restriction') a central requirement in the definition of cartel conduct by ignoring the term Kyodo-Suiko.[173] That is, collusion is described as a phenomenon whereby enterprises mutually restrain their actions in a market.

For a finding that a cartel has been formed, there first needs to be mutual consent or agreement between firms in some way. Such mutual consent among firms concerning collusion is defined as the 'communication of intent'. There are no certain or specific forms necessary for a finding that there has been a communication of intent. Communication of intent includes moderate communications of intent such an explicit as well as a tacit agreement of mutual restraint.[174] Tacit agreement is determined to be such when it is considered that there is sufficient evidence of actual fulfillment and maintenance of such understanding.[175] It requires evidence that specific communication conduct has taken place among firms. Thus, it is clear that the definition of 'communication of intent' implies an action in order to ensure the

[171]和田健夫「不当な取引制限の成立と立証 (上)」『商学討究』45 巻 3 号 (1995) 113-114 頁。

[172]根岸哲『独占禁止法の基本問題』（有斐閣, 1990 年）59 頁。

[173]和田健夫「不当な取引制限の成立と立証 (下)」『商学討究』47 巻 2/3 号 (1997) 147 頁。

[174]公正取引委員会競争政策研究センター「カルテル・入札談合における審査の対象・要件事実・状況証拠」（2007 年 7 月）49 頁。

[175] Shingo Seryo, Cartel and Bid rigging, Japan International Cooperation Agency, JICA's Documents Designed for Developing States: Training Course on Competition Law and Policy, Aug. 31, 2004: 6. Available at: http://www.jftc.go.jp/eacpf/05/jicatext/aug31.pdf

foreseeability of the activities on the part of firms. Therefore, in Japan, parallel conduct alone is an insufficient factor in constituting evidence of a cartel[176] without evidence of exchange of information or communication among firms. This is because, according to the JAMA, conscious parallelism lacks the requirement of "mutual restriction, as companies do not mutually communicate their intentions regarding their competitive conduct. That is, they are not restricted mutually and do not have competition restrictive intentions. Therefore, when the JFTC judges conscious parallelism as a cartel, it is necessary to prove an existence of communication of intent among firms".[177]

In Japan, the notion of 'communication of intent' is chiefly defined in bid-rigging cases.[178] There are a few price-fixing cases, where there have been findings of 'communication of intent' on the basis of circumstantial evidence.

In the Toshiba Chemical case, the court clarified the essential criteria for the necessary finding of 'communication of intent' to prove collusion. The Tokyo High Court in the *Toshiba Chemical* case had stated:

> "Recognition and intention of the entrepreneurs should be considered by examining various circumstances before and after the price-raising, and the evaluation of whether there is mutual recognition or acceptance among entrepreneurs regarding the price-raising or not."[179]

Thus, in the absence of any explicit agreement, the existence of a tacit agreement may be proven by showing the following facts: First, the existence of a prior exchange of information and opinions among the parties concerned. It is sufficient to show that an exchange of opinions took place.[180] Second, the content of negotiations must be

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[176] Tatsuyoshi Masuda, Exchange of Price Information and the Japanese Anti-Monopoly Law, *Economic journal of Hokkaido University* 32 (2003): 31.

[177] Ibid.

[178] *See*, for example, Supreme Court judgement in *Arai-Gumi and Automatic Postal Sorting Machine* cases.

[179] The Tokyo High Court Judgment 1995 (Decision File: Volume 4, at 145).

[180] Seryo Shingo, Cartel and Bid Rigging, Training Course on Competition Law and Policy, Japan International Cooperation Agency, 2004:8. Available at: http://www.jftc.go.jp/eacpf/05/jicatext/aug31.pdf

known to regulators; for example, specific standards can be demonstrated concerning the rate or breadth of price increases.[181] Third, the uniformity of actions as a result,[182] which can be parallel pricing.

In Toshiba Chemical case, the proof of the existence of a communication of intention among firms has been defined in the following three ways. First, firms have exchanged their opinions regarding the price of the product concerned at the meetings of the trade association. The evidence that indicated this fact was the statement of participants in the meetings and the trade association meeting's participants' list. Second, when the three most significant companies had expressed their intention to raise the price, there had been no objection by the other five companies at the meeting. Further evidence was also the statement of participants in the meeting. Third, all eight companies gave instructions in their offices to raise the price, and announced and carried out price increase for users. The statements of persons involved, press release of the price increase and notice of price increase sent to their customers where the evidence that proved the concertation. Consequently, if along with parallel behavior, a prior exchange of information has taken place, and even though the content of the information exchanged is unclear, the conduct is likely to be found collusive as there is a strong causal link between the prior exchange of information and the subsequent parallel behavior. That is, it proves that a prior exchange of information has resulted in concerted parallel conduct in a market.

The Japanese literature presents *Toshiba Chemical* as a leading case in defining the meaning of 'communication of intent.' Nonetheless, whether *Toshiba Chemical's* definition of 'communication of intent' should apply to an oligopolistic situation is a

[181] Ibid.

[182] Kishii Daitaro, Mukoda Naonori, Wada Tateo, Otsuki Fumitoshi Kawashima Fujio, Hienuki Toshifumi, *Economic Law: Antitrust Law and Competition Policy*. 8th ed.,Yuhikaku Alma, 2016. p.90.

controversial issue, as it had involved eight firms, which implies less market concentration. Therefore, with regard to this point, not many scholars agree with the Tokyo High Court's view *in Toshiba Chemical.* For instance, according to Professor Shoda,[183] it is possible to infer collusion based on price similarity and economic analysis of the market (economic evidence). Professor Negishi, argues that it is almost impossible to separate mere oligopolistic parallelism from tacit collusion just based on the notion of 'communication of intent,' because 'communication of intent' merely describes interdependence. He suggests that the problem of oligopoly should rather be considered from the viewpoint of the objectives of competition law and legislative intent, which is the promotion of fair and free competition.[184] Furthermore, Professor Negishi also notes that conscious parallel behavior does not differ from intentional price-fixing conduct, and therefore the prohibition of conscious parallelism does not contradict the position of the JAMA.

2.3.2. Price signaling vs. tacit collusion

In *Modifier cartel case,* the JFTC found that three firms had agreed to mark up the selling price of modifiers used for polyvinyl chloride plastics, and then issued a decision order to eliminate such conduct on November 9th of 2009.[185] These companies reciprocally exchanged information verifying the rate and strategy of price increases for modifiers. Kureha was the first company who made a public price announcement on 8 November, and then it requested other firms to follow its pricing. Following with Kureha's price action, Mitsubishi also publicly announced its price elevation on 14 November. Then, Kaneka also made a public statement on price elevation on 21

[183]正田彬『全訂独占禁止法 1』（日本評論社　1980 年）232 頁。
[184]根岸哲 「市場構成規制の必要性と可能性 (一」『神戸大学雑誌』23 巻 1・2 合併号 52 頁。
[185] *See* the JFTC website: https://www.jftc.go.jp/eacpf/05/jicatext/sep15_1.pdf and https://www.jftc.go.jp/en/pressreleases/yearly_2003/dec/2003_dec_11_files/2003-Dec-11.pdf

November. The issue with this case was that communication connected to coordinated behavior is reasonable in some circumstances. That is, a firm's press release was deemed to be its communication of price elevations. In other words, the firm's press release was one of the factors that led to the notion 'mutually' being invoked. Therefore, a firm's public press release can be interpreted as proof of mutual communication to raise prices, if some other communication, such as collectively organized price elevations and the exchange of price information during negotiations, may be verified as well.[186]

Another relevant price-fixing case concerning the standard of proof for a finding of a communication of intention is the *International Air Freight Forwarding* case.[187] The JFTC imposed an administrative surcharge on fourteen international freight forwarders condemning them for cartel formation regarding additional fuel surcharges and airport security charges to air-cargo service charges due to the rapid price increase on fuel surcharges around the world. According to the JFTC, the 12 firms had negotiated price coordination at meetings of the Japan Air Cargo Forwarders Association, and ultimately that arrangement lasted from 2004 to 2007. They dissolved the cartel only after EU and US anti-trust authorities began investigations in 2007. The problem, in this case, is that the reasonableness of communication is only linked to coordinated conduct. This communication enables firms to share confidential trade information among rivals; therefore, such a situation would never have happened under the conditions of free competition. Consequently, an anti-competitive agreement among firms was likely to have taken place. The firms had claimed that the price information about new surcharges had been public. Nonetheless, carefully examining the details of disclosed information – particularly the names, content, status, and results of negotiations with their trading partners – the courts concluded that the information was

[186] Koki Arai, Indirect evidence in Japanese cartel control, *IIC-International Review of Intellectual Property and Competition Law* 46, no. 3 (2015): 352.

[187] The cease and Desist order issued by the JFTC available at: https://www.jftc.go.jp/en/pressreleases/yearly-2009/mar/individual-000056.html

typical that would usually be shared by firms, and decided that the exchange of information had constituted evidence of indirect communication.[188]

Comparing this case with the modifier cartel case mentioned previously, the reasonableness of communication represents a decisive factor for the finding of coordinated conduct. If the interfirm communication in question is not reasonable within a business context, then the existence of communication may be suggestive of coordination. Reasonableness is justified from the perspective of the following factors: (i) consumers, (ii) stakeholders, and (iii) society and the public. For example, a public price announcement can be reasonable in terms of accountability before consumers, but it might also be difficult to justify why a firm announces its confidential trade information. [189]

2.4. Comparison and concluding remarks

The overview of competition laws in the three jurisdictions considered in the foregoing suggests the presence of more similarities than differences regarding legal approaches towards the issue of conscious parallelism in the US, the EU, and Japan. For instance, the legal interpretation of the notion of 'agreement' has been defined similarly: [190] a 'meeting of minds' in the US; a 'concurrence of will' in the EU; and a 'communication of intent' in Japan. Furthermore, in all three jurisdictions, to prove collusion courts demand something more than just showing the presence of parallel conduct. Also, there is no clear answer as to exactly what circumstantial evidence would suffice to prove collusion.

In the US, high administrative surcharges and severe criminal sanctions for cartel conduct have necessitated high evidentiary standards to prove collusion in order to avoid

[188] Ibid.

[189] Koki Arai,Indirect evidence in Japanese cartel control, *IIC-International Review of Intellectual Property and Competition Law* 46, no. 3 (2015):353.

[190] Hiroshi Iyori, A Comparison of US-Japan Antitrust Law: Looking at the International Harmonization of Competition Laws, (1995) *Pacific Rim Law and Policy Journal* 4: 73.

false positives. Although, courts were initially in their decisions prone to considering parallel pricing as sufficient evidence of tacit collusion, courts in subsequent leading cases have undisputedly ruled that conscious parallelism is not in and of itself a violation of competition law, and that supplementary 'plus factors' are necessary to establish the existence of a cartel agreement. Nowadays, US antitrust law acknowledges that for a finding of tacit collusion, 'plus factors' should be demonstrated along with parallel conduct. Nonetheless, plus factor analysis has failed to distinguish lawful parallel conduct from illegal concertation. Most of the plus factors share similar characteristics with interdependence thus causing some confusion for courts. As a result, cases relying on plus factors often result in a refusal on the part of the courts to infer collusion based on circumstantial evidence. Thus, whether and when parallel conduct constitutes tacit collusion remains has not been sufficiently settled in US competition law.

In particular, the use of some facilitating practice as a plus factor raises some issues, in particular when advance price announcement practices are used as a price signal. The review of price signaling under Sections 1, 2, and 5 of the Sherman Act demonstrates the uncertainty as to whether signaling is unlawful. As a matter of fact, a unilateral signal lacks the 'agreement' element for a Section 1 violation and lacks the exclusionary conduct requirement for Section 2 that the FTC has used to challenge unilateral signaling conduct under Section 5. The difficulty with the use of Section 5, is that it creates significant uncertainty as to when a unilateral statement may later be seen to violate antitrust laws. And while the FTC has a string of consent decrees resulting from bare invitations to collude, even the Commissioners sometimes disagree over whether a statement constitutes an 'invitation' or not. Rather than relying on Section 2 or Section 5 to target signaling conduct, it is better to analyze signaling exclusively under Section 1: if the signal results in an anti-competitive agreement, then the signal may be challenged; otherwise, the unilateral communication should not be actionable under antitrust laws. [191]

[191] https://pdfs.semanticscholar.org/4e17/7cad676129cedd366a021e323969a925b3a9.pdf

EU competition law employs two controversial notions in defining cartel conduct: 'agreement' and 'concerted practice'. Even though the notion of concerted practice is deemed to extend over such forms of cartels that do not involve an agreement, EU courts have made it clear that parallel behavior in and of itself does not constitute a concerted practice within the meaning of Article 101 (1) of the TFEU. Parallel behavior by competitors can, at most, constitute circumstantial evidence for the finding of concerted practice. Also, under EU competition law, firms escape antitrust liability if another plausible explanation for the parallelism of behavior can be adduced. In an oligopolistic market, defendants will invariably try to rely on the explanation of the natural outcome of oligopolistic interdependence for their parallel behavior. Under tight oligopolistic market conditions, collusion is then not the only plausible explanation for parallel behavior, as the court has explicitly recognized intelligent alignment as an explanation of parallel behavior due to interdependence in oligopolistic markets.[192]

Price signaling in the EU also can be found to have pro- and anti-competition effects, depending on the circumstances. The definitive question with regard to the particular market conduct may be if any valid business explanations exist for firms to behave in this specific manner. If an undertaking cannot provide a legitimate reason for its price signaling, and it is possible to determine that the announcements were not made because of an undertakings individual intention, these factors may constitute sufficient evidence of collusion. Furthermore, if the advance price announcements do not make no firm commitment towards consumers, such as a maximal price limits, this may be considered tacit collusion.

In Japan, there is no distinction of cartel conduct into 'agreement' or 'concerted practice'. To constitute a cartel, it is necessary that there is mutual consent or a 'communication of intent' between firms. Circumstantial evidence in Japan may also prove the existence of a communication of intent. As the case law demonstrates, a communication of intent may be found when the following three are present: (i) *ex-ante* exchange of information, (ii) content of the exchange of information, (iii) and same and

[192] Ibid.

similar *ex-post* actions. In practice, to prove the existence of communication of intent between firms, it is necessary to show evidence of actual fulfillment of such intention by specific communicative action. Therefore, mere parallel behavior without communication evidence would fail to establish collusion in Japan. Thus, in Japan, the 'parallelism plus' doctrine is more coherent. The case law has clarified that, along with parallel behavior, evidence as to communication should be demonstrated by the competition authority in order to establish cartel conduct. Practically, it implies the competition authority should identify the actual conduct of exchange of information among firms. As a result, such relatively high evidentiary standard makes the task of proving collusion rarely possible when solely based on circumstantial evidence.

Thus, an overview of cartel regulation in the US, EU, and Japan would suggest that courts are reluctant to infer tacit collusion from consciously parallel behavior. Courts have faced this seemingly insurmountable dilemma as they cannot reasonably expect firms not to react to their competitors' pricing behavior. Judicial practice has clarified that mere conscious parallelism is not sufficient to imply tacit collusion without additional evidence, excluding the independent behavior of firms. However, there is still no clear answer as to what additional evidence suffices for an inference of collusion. In terms of applying the rules of competition to tacit collusion to demonstrate its occurrence, facilitating practices may help to determine whether the conduct in oligopolistic settings sets the conditions for tacit collusion or simple oligopolistic interdependence. Thus, if these practices pose risks for competition, it may be justifiable for competition enforcers to seek to intervene.[193]

[193] Jaime Eduardo Castro Maya, The Limitations On The Punishability Of Tacit Collusion In EU Competition Law. 236-237.

Chapter 3. ANALYSIS OF SCHOLARLY OPINIONS ON TACIT COLLUSION

It has become clear from Chapter 2, that courts across the three jurisdictions within the scope of the present dissertation generally do not consider mere conscious parallelism as tacit collusion. Not all scholars agree with the courts on this issue, and have different views as to how tacit collusion should be treated under competition rules.

The oligopoly problem has been exhaustively documented in the literature. The complexity of regulation of cartel conduct in the oligopolistic market began to be recognized in the 1950s. Many scholars have since proposed theories and policy recommendations on how to deal with tacit collusion. This chapter seeks to present these scholarly attempts in solving the issue of tacit collusion in oligopolistic markets. Scholars have made good attempts to define tacit collusion, and to highlight its distinguishing aspects from behavior that may be attributed to mere lawful oligopolistic interdependence. However, the author of this thesis does not consider these theories to contradict each other, but, on the contrary, considers that scholars have looked at the issue from different angles and, therefore, that their theories are mutually supplementary.

3.1. The debate between Turner and Posner

3.1.1. Donald Turner's approach (1962)

Professor Turner, reflecting the general approach of the 'Harvard School,' believes that due to specific conditions, supra-competitive pricing is unavoidable and constitutes normal behavior for oligopolistic markets.[194] Professor Turner argues that parallel pricing in oligopolistic markets can take place 'without overt communication or agreement,' but through a 'rational calculation' of possible outcomes of the pricing

[194] Donald F. Turner, The Definition of Agreement Under the Sherman Act: Conscious Parallelism and Refusals to Deal, 75 *Harvard. Law Review* 655 (1962): 666.

decisions on rivals, how they are likely to react, and what kind of consequences that response may bring to each firm's profitability. Turner contends that blaming firms for such 'conscious parallelism' is problematic as a traditional 'meeting of the minds' agreement is hard to establish.[195] Therefore, Turner notes that "[a]s a legal conclusion, this could be stated in either of two ways: (a) there is no infringement because there is no 'agreement;' or (b) there is no infringement although there is 'agreement,' but the agreement cannot properly be called an unlawful agreement."[196] Consequently, he argues that conscious parallelism in and of itself should not be regarded as cartel conduct per se.[197] From this premise, Turner indicated that parallel conduct only implies illegal behavior if oligopolistic interdependence cannot explain all of the firms' conduct.[198]

Turner claims that conscious parallelism is devoid of anything that might reasonably be called an agreement when it involves simply the independent responses of a group of competitors to the same set of economic facts - independent in the sense that each firm would have made the same decision for himself even though his rivals decided otherwise.[199] It is the last part of the sentence which is essential to distinguish between behaviors which should be called rational decision-making by an oligopolist.

Turner maintains that to prohibit oligopolists from taking into consideration possible reactions and decisions of rivals is to require them to act in an economically irrational manner. Therefore, he concludes that oligopolistic firms that take into account the anticipated reactions of rivals in setting their basic prices should not be characterized as being in collusion.[200]

However, Turner, does recognize that the problem of conscious parallelism must be dealt with in some manner. As a remedy, he favors structural solutions. For Turner;

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[195] Donald F. Turner, The Definition of Agreement Under the Sherman Act: Conscious Parallelism and Refusals to Deal, 75 *Harvard. Law Review* 655 (1962): 664, 671.
[196] Ibid., 671.
[197] Ibid., 665, 671.
[198] Ibid., 672.
[199] Ibid., 663.
[200] Ibid., 683.

oligopolists are only pricing rationally when they take into account the probable responses by their competitors, [201]so the only effective remedy would be to increase the number of competing firms by breaking them up.[202] He favors divestiture because it is a structural remedy and is thus better suited to the elimination of concentration, a structural condition that he believes is a proximate cause of conscious parallelism.

3.1.2. Richard Posner's approach (1969)

For his part, Professor Posner has proposed a different approach to conscious parallelism presenting the views of the 'Chicago School' on the oligopoly conundrum. Posner challenges the assertion that anti-competitive effects are an unavoidable outcome of an oligopolistic market structure, and criticizes Turner's explanation of parallel conduct as unreflective of actual market conditions.[203] The essence of Posner's argument is that it is hard to achieve implicit price coordination merely due to the structural conditions of the oligopolistic market.[204] Moreover, an oligopolistic setting only makes this kind of coordination easier – not inevitable.[205] In other words, Posner claims that conscious parallelism is difficult to achieve without some communication or agreement between the firms.[206]

Furthermore, in contrast to Turner's view, Posner refuses to justify parallel pricing by 'oligopolistic interdependence' as economically rational among oligopolists. He claims that it is in fact entirely rational for an oligopolist to refuse to collude and to expand output until the return to investors is roughly equal to what they could otherwise earn. He further maintains that it is not irrational for such a firm to set a price at approximate marginal cost rather than one that is artificially high. Conversely, Posner

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[201] Ibid., 671.
[202] Donald F. Turner, The Scope of Antitrust and Other Economic Regulatory Policies, 82 *Harvard. Law Review* 1207, 1230-31 (1969).
[203] Ibid., 55, 69.
[204] Ibid.
[205] Ibid., 66.
[206] Ibid., 60-69.

argues that parallel conduct may be a helpful indicator of a formal yet concealed cartel. When the actions of a formal cartel are wholly concealed, however, the parallel behavior of the cartel participants is consistent with the high probability of a tacit collusion. Therefore, Posner believes that conscious parallelism can be controlled under cartel regulation.

Professor Posner suggests that tacit collusion can be inferred through an economic analysis of market conditions and certain behavior on the part of firms.[207] He claims that the following sorts of conduct can be evidence of the presence of tacit collusion: (i) joint systematic price discrimination; (ii) prolonged excess of capacity over demand; (iii) relatively low frequency of changes in price; (iv) disproportionate response of price to changes in cost; (v) abnormal profits; (vi) price leadership; (vii) the existence of fixed market shares; (viii) identical sealed bids for nonstandard items; (ix) refusal to offer discounts in the face of substantial excess capacity; (x) the announcement of price increases far in advance without legitimate business justification for so doing; (xi) and public statements as to what a seller considers the right price for the industry to maintain.[208]

Furthermore, Posner expands the scope of the traditional theory by emphasizing the use of 'economic evidence' (including economic structure, conduct, and performance) to infer collusion, rather than the 'cops and robbers' method of seeking evidence of interfirm communication.[209] Thus, he argues that if a particular industry demonstrates characteristics that encourage conscious parallelism, and if specific economic tests indicate that the market is indeed anti-competitive due to price levels

[207] Richard A. Posner, Oligopoly and the antitrust laws: A suggested approach, *Journal Reprints Antitrust Law & Economics* 1 (1969): 1065.
[208] Richard A. Posner, Oligopoly and the Antitrust Laws: A Suggested Approach, *21 Stanford Law Review* (1968). 1582-1583.
[209] Ibid.

being substantially above a competitive level, then the uniform activity of the participants may constitute cartel conduct.[210]

3.1.3. Comparative analysis of Turner and Posner's view

In this author's view, the main difference between the approaches of Turner and Posner is that Turner considers parallel behavior from the viewpoint of explicit collusion, while Posner recognizes that conscious parallelism may amount to tacit collusion. As mentioned in previous parts of this thesis, a subtle difference between tacit and explicit collusion is that tacit collusion can occur without direct communication or agreement. That is why Turner does not recognize conscious parallelism as a cartel given that no direct communication exists among firms. Meanwhile, Posner argues that some economic factors can indirectly demonstrate the existence of collusion. According to Turner's approach, one has to completely exonerate conscious parallelism from cartel conduct. According to Posner's approach, one has to completely prohibit conscious parallelism.

Therefore, in the present author's view, it is reasonable to strike a balance between the two approaches. That is, not all conscious parallel pricing is necessarily justified conduct, according to Turner, and not all conscious parallel pricing is necessarily constitute cartel, according to Posner. Therefore, depending on circumstances, parallel behavior can be the outcome of tacit collusion as well as lawful oligopolistic interdependence. The problem is how to distinguish between the two.

As discussed in the foregoing, the main feature of tacit collusion is that it may occur without direct communication between firms. Therefore, many scholars addressed

[210] *High Fructose Corn Syrup Antitrust Litigation* is the case in which collusion was found on the basis of circumstantial (economic) evidence. Richard Posner sat as judge in that case.

the issue of facilitating practices, which in many cases help firms coordinate parallel pricing without explicitly and directly involving into the agreement. Nonetheless, facilitating practices may involve legal conduct and may have pro-competitive as well as anti-competitive effects.

It should be noted that both Posner and Turner agree that the presence of facilitating practices may be a good indication of collusion.[211] For instance, if oligopolists announce price elevation far in advance of the actual implementation date for no reason, it may be suggestive of a firm's intention to facilitate supra-competitive pricing. In such circumstances, both Posner and Turner would apparently find collusion. Therefore, scholars mentioned below have strived to answer the question when the use of facilitating practice may imply the firm intention to reach tacit collusion.

3.2. Other scholars' opinions

3.2.1. Michael Blechman

Professor Blechman argues that the distinction between illegal agreement and conscious parallelism is a very real one which can be observed in practice by examining the behavior of oligopolists at different times in specific industries. It follows, then, that proof of agreement requires that inferences can be drawn from the words and actions of firms, where some facilitating practice, such as a public price announcement, might be present. That is, public pricing announcements may be used effectively to arrive at anti-competitive understandings. Every price announcement is a communication which, practically, reaches competitors as well as customers. The question is when and whether firms use price announcements for pro-competitive reasons or to reach collusion.

[211] Richard A. Posner, Antitrust Law: An Economic Perspective 91–93 (University of Chicago Press, 2001):98-9. D. F. Turner, The Definition of Agreement Under the Sherman Act: Conscious Parallelism and Refusals to Deal, 75 *Harvard Law Review* 655, 666 (1962):675-6.

In resolving this issue, the substance of the pricing information being announced is a relevant factor. The release of a current price list may not, by itself, suggest a basis for an agreement. However, a statement as to a series or pattern of expected price increases, the pre-announcement of a price elevation to occur in the future, or a public pledge to cease offering discounts, might, in appropriate circumstances, be construed as coordination. A further relevant consideration may be whether the announcement merely contains information of commercial necessity, is delivered to customers, or whether it goes beyond that in an apparent effort to communicate with competitors. As already indicated, however, the ultimate issue of fact in each case is whether the parties intended and understood the announcement to be a 'signal', that is, an assurance or commitment as to future pricing actions. And that is a question that can be fairly answered only in light of all of the relevant direct and circumstantial evidence relating to the defendant's state of mind.[212]

3.2.2. John Lopatka

Lopatka agrees that the presence of facilitating practices may be good indication of collusion. He argues that when courts demand 'something more' than just mere parallel conduct to infer collusion, they typically search for practices that facilitate coordination among firms.[213]Therefore, practices paradoxically become unlawful when they facilitate coordination that has been achieved via mere unilateral pricing decisions. However, Lopatka argues that 'parallel conduct plus facilitating practices' are insufficient to infer collusion but there are three practical issues that courts must overcome to infer collusion: namely, a) whether the firms engaged in practices that facilitated interdependent pricing by reducing uncertainty; b) whether those practices substantially reduce uncertainty; and c) how to distinguish between such ambiguous practices that have the potential both to

[212] Michael D. Blechman, Conscious Parallelism, Signalling and Facilitating Devices: The Problem of Tacit Collusion Under the Antitrust Laws. *New York Law School Law Review.* 24 (1978): 895, 896.
[213] John E. Lopatka, Solving the oligopoly problem: Turner's try, *Antitrust Bulletin* 41 (1996):907.

facilitate interdependent pricing and to increase market efficiency.[214] In this regard, Lopatka suggest a behavioral remedy to prohibit practices that facilitate interdependent pricing.

3.2.3. George A. Hay

Professor Hay argues that the phrase 'tacit collusion' has no natural or unique meaning. He notes that terms such as 'meeting of the minds' and 'conscious commitment to a common scheme' are less helpful to identify whether a firm is involved in tacit collusion, given that a 'meeting of minds' can exist to the same extent in case of a lawful oligopolistic interdependent situation.

Hay argues that tacit collusion can be differentiated from pure oligopolistic interdependence. The latter exists where the parallel behavior results from the market structure, and the firms have not undertaken any steps to eliminate competition among themselves. On the other hand, tacit collusion implies that the firms have intentionally taken specific actions to eliminate or reduce competition.[215] And those specific actions can sufficiently be facilitating practices. Hay reasons that if firms have deliberately undertaken one or more facilitating practices with the intention of substantially reducing competition among themselves, their conduct constitutes unlawful tacit collusion. If facilitating practices have been undertaken for legitimate business purposes, or that the practices did not substantially reduce competition among firms, there has been no violation.

Furthermore, Hay insists that telling a court that it may infer tacit collusion from circumstantial evidence or even from the presence of certain plus factors is not helpful since, unlike inferring a formal agreement from circumstantial evidence, the court has no real way of knowing what they are looking for. By default, plus factors become violations, not the circumstantial evidence that a violation has occurred. If facilitating

[214] Ibid. 902

[215] Hay, George A. "The Meaning of``Agreement''under the Sherman Act: Thoughts from the``Facilitating Practices''Experience." *Review of Industrial Organization* 16, no. 2 (2000):128.

practices are to be the essence of the violation, the court should consider facilitating practices along with violation itself.[216]

3.2.4. Thomas Piraino

Professor Piraino has also attempted to clarify the dividing line between illegal and permissible oligopoly conduct without violating US Supreme Court precedent. His theory is attractive in its simplicity of proposing a 'purpose-based' approach to control oligopolistic parallel conduct. [217] He argues that judges are as a matter of course required to identify justifications for the behavior of defendants in contract, tort, employment, and criminal cases, therefore, there is no reason why they should not be doing this in antitrust cases as well. Indeed, a purpose-based inquiry is particularly appropriate in oligopoly pricing cases. Piraino argues that game theory can explain how firms can signal by using advance price announcements, to communicate with other firms in an oligopolistic market, and thus move prices towards supra-competitive levels without attracting much attention of enforcement authorities.[218] Piraino suggests that courts should question the reason for practices like signaling. That is, if legitimate, non-collusive reasons exist for practices such as advance public price announcement, the law should not consider facilitating practices as violation. In the absence of a legitimate purpose, then the facilitating practice should be condemned.[219] Piraino argues that such an approach would enhance the analytical capacity of the courts by making them focus on the defendant's purpose, which the courts are skillful to find out.[220] Thus, Piraino insists that one must inquire into the purpose behind the signals and then only prohibit those without a legitimate, competitive business purpose. Under such circumstances, the initiating firm's action should be construed as an 'offer' to participate in a price-fixing cartel, and the

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[216] George A Hay, The Meaning of 'Agreement' under the Sherman Act: Thoughts from the 'Facilitating Practices' Experience, *Cornell Law Faculty Publications.* Paper 1146. (2000): 128-9.
[217] Thomas A. Piraino Jr, Regulating Oligopoly Conduct under the Antitrust Laws, *Minnesota Law Review* 89 (2004): 13-14.
[218] Ibid., 19-20.
[219]Ibid., 32-39.
[220] Ibid., 39.

conduct of the other firms in response should be deemed constituting 'acceptance' of that offer.

He claims that the courts should infer collusion when one or more firms in an oligopolistic market signal their intention to initiate a price increase in a manner contrary to their individual self-interest, and all firms in the market subsequently accept the increase by acting in a manner no less contrary to their own interests. For example, in certain industries, such as the airline industry, it is customary for firms to advise customers ahead of price changes, so that they can plan their purchases in advance. By contrast, in the case of gas stations, simply posting that it would raise prices by 10% in seven days would be contrary to the station's legitimate independent interests. The station would have no reason to notify customers in advance of the planned price increase. Automobile drivers need not know price changes in advance, because they have no way of storing excess gasoline (or changing their driving habits) in anticipation of a price increase. Thus, gasoline service stations have no legitimate independent reason for preannouncing price changes. Indeed, preannouncements of price increases are contrary to a station's independent interests, because they may cause consumers to immediately begin patronizing other stations. If one gasoline station does preannounce a price increase, the announcement will signal to other stations the original station's intention to propose a higher consensus price. By announcing a price increase in advance, the station can signal to its rival a desire for a new consensus price. The other station can accept the new consensus price by posting its own an announcement that it, too, will be raising prices to the same level in seven days.

When oligopolists have a legitimate reason to disclose pricing information to customers, they often cannot avoid the simultaneous disclosure of the information to their rivals. Indeed, when consumers are widely dispersed, as in retail markets, suppliers often cannot disclose pricing information other than in a broad public manner. Customers also may need advance notice of price changes to plan their purchases. Lastly, firms may need to disclose prices to convince their customers that they are not charging discriminatorily high prices. Thus competitors will naturally obtain access to

such information, and that fact should not make the information disclosure illegal. Therefore, the courts may infer tacit collusion when oligopolists publicly disclose information that has no value to consumers.

3.2.5. Matthew Bunda

Professor Bunda argues firms are creative in masking their illegal conduct to avoid liability,[221] so courts should seriously consider the value of economic evidence in price-fixing cases[222] along with 'traditional conspiracy' evidence.

Furthermore, Bunda disagrees with Piraino's approach of instructing courts to inquire into the purpose behind public price announcement practices and then only prohibit those without a legitimate, competitive business purpose. Bunda admits that Piraino's approach is an attractive solution due to its simplicity, but that it is practically less valuable because most firms can articulate a reason why a particular pricing announcement had a legitimate business purpose similar in the case of conscious parallelism. The court is again left to either substitute its own decision for the legitimacy of the asserted business reason or determine whether the evidence offered to prove that business purpose 'tends to exclude' the possibility that the communication was intended for legitimate business purposes.[223]

Bunda suggests that enforcement authorities may seek to approach such concerns from the perspective of merger regulation to stop mergers that are likely to cause high levels of concentration in a market. If regulators/the government have reason to believe the market is behaving in a suspiciously parallel fashion, and the market is highly

[221] Matthew M. Bunda, Monsanto, Matsushita, and Conscious Parallelism: Towards a Judicial Resolution of the Oligopoly Problem, *Washington University Law Review* 84 (2006): 209.
[222] Ibid.
[223] Ibid., 207.

concentrated, it may seek to prohibit practices possibly facilitating the collusion. If there is nothing to ban, firms may seek the termination of the injunction by showing the inefficient and burdensome results caused by it. If the practices do facilitate collusion, prohibiting such practices will improve market performance.

3.2.6. Reza Dibadj

Professor Dibadj argues that the key distinction between unlawful 'tacit collusion' and pure interdependent conduct lies in whether a firm is using specific facilitating practices that might serve as signals and result in conscious parallelism.[224] Such practices are capable as serving as conduits for the exchange of essential business data on price, sales volume, and/or cost. An advance public price announcement may serve this function. He argues that simultaneous price announcements without legitimate business reason for doing that may be probable signs of tacit collusion.

He suggests that the following analysis of interactions between four variables such as price, output, cost, and demand can be helpful in distinguishing mere conscious parallelism from tacit collusion. In a competitive marketplace, price and output usually rise or fall according to cost and demand. In a collusive marketplace, price rate and output vary in methods that are external to cost and demand.[225] For instance, collusion is likely when prices are increasing even though costs and demand are decreasing. If the parallelism is due to actual changes of cost or demand then it points out the competition. On the other hand, if parallelism occurs independently of these variables, then it likely indicates collusion. In other words, Dibadj argues that if a firm announces a price change (increase or decrease) that other firms respond by matching it, then this behavior precisely describes tacit collusion. Conversely, there should be no tacit collusion when the signal for a price modification originates from outside the market. For example, all firms may reduce their prices at the same rate due to a fall in market demand.

[224] Reza Dibadj, Conscious Parallelism Revisited, *San Diego Law Review* 47 (2010):636.
[225] Ibid., 619.

Thus, Dibadj insists that if price announcements and parallel behavior are driven by external factors, such as cost and demand changes, they do not constitute tacit collusion. Nonetheless, if price announcement occurs with no legitimate economic factors of cost and demand, such conduct is likely to be tacit collusion.

3.2.7. William Page

Professor Page proposes that competition authorities ought to search for tacit collusion not in the markets in which competing firms coordinate prices with facilitating practices, but, rather, in markets in which the evidence suggests that competing firms are supplementing facilitating practices with communication.[226] Page claims that tacit collusion is less successful without communication, and therefore facilitating practices are effective only if they separately come together with private communication. He argues that a focus on communication may also help to avoid false negatives.

In addition, Page insists that collusion without communication is difficult where firms are asymmetric in size. In that case, firms at least need to communicate to make some agreement about penalties for non-cooperative firms.[227]

Furthermore, Page suggests that the more complex the facilitating practice itself, the less likely the practice to be sufficient for price coordination without additional communications.[228] Therefore, investigators should be looking not at the markets most conducive to price coordination, but at more complex and more competitively structured markets in which firms have nevertheless managed to solve coordination problems with facilitating practices.[229]

Furthermore, Page refers to Marshall, Marx, and Raiff 's analysis which finds that changes in the frequency, timing, leadership, regularity, effective dates, and success

[226] William H. Page, A Neo-Chicago Approach to Concerted Action, *Antitrust Law Journal* 78 (2012): 200. A*vailable at* http://scholarship.law.ufl.edu/facultypub/584
[227] Ibid., 190.
[228] Ibid., 194.
[229] Ibid., 194-5.

of price increase announcements might be crucial indicators of collusion.[230] The analysis suggests that, in the absence of collusion, firms never announce price elevation jointly, and smaller firms never lead a joint price announcement. Therefore, Page argues that competition authorities should look for changing patterns in the use of facilitating practices that probably imply the use of communication to solve coordination problems. When price elevation does not result from cost or demand variations, firms have to utilize both communication and facilitating practices to solve coordination challenges.

3.2.8. William Kovacic

Professor Kovacic suggests that the inference of the existence of a cartel agreement can be assessed through the reactions of buyers. He divides markets into two types: markets with passive buyers and markets with active buyers.[231] Kovacic does not offer a specific industry example of the applicability of his theory, therefore it is relevant to any industry with powerful buyers. For instance, let us consider the scenario, where oligopolistic firms have simultaneously announced a price increase. If buyers are passive players in the market, they will accept the announced price as set by firms. On the other hand, if the buyers are active players, they will try to lower the price by threatening to shift to another seller or use a foreign supplier in case of a price increase. That is, if firms want to raise prices, they will undoubtedly face buyer resistance.[232] The ability of firms to maintain collusive prices through tacit collusion is limited because buyer resistance may take advantage of the lack of interfirm communication, monitoring, and enforcement and demand for a discount.[233] Therefore, according to Kovacic, if the

[230] Robert C. Marshall, Leslie M. Marx & Matthew E. Raiff, Cartel Price Announcements: The Vitamins Industry, 26 *International Journal of Industrial Organization* 762, 763 (2008).
[231] William E. Kovacic et. al., Plus Factors and Agreement in Antitrust Law, 110 *Michigan. Law Review* 393 (2011): at 409-410.
[232] Ibid.
[233] Ibid., at 413.

announced new price keeps unchanged regardless of buyer resistance, it would appear that the sellers, i.e., the firms in an oligopolistic market, must be communicating beyond the mere presence of a public price announcement, since without collusive communication sellers would fail to increase their prices.

3.2.9. Louis Kaplow

Professor Kaplow refers to tacit collusion as successful oligopolistic coordination. He argues that tacit collusion may be shown by market-based evidence such as pricing patterns, symptoms of price elevation, and facilitating practices. It should be noted here that Kaplow considers facilitating practices as the 'tail', not the 'dog'.[234]

He argues that a facilitating device can serve as interfirm communication and therefore its presence may support an inference of oligopolistic collusive pricing. These might include advance public price announcements, predictions about market demand or costs, and open discussions of various matters at trade association meetings. These public announcements could be quite detailed, describing price moves, dates, or they may be vague, such as a statement that the firm believes that demand has fallen or raised.[235] Such public announcements are likely to be interpreted as an invitation rather than a unilateral action.

However, unlike Page's theory (discussed previously), Kaplow argues that communication should not be necessary to establish a violation. Indeed, Kaplow argues that requiring specific forms of communication to prove collusion simply confuses courts, introducing incoherencies, and may exempt inefficient tacit price coordination harmful to social welfare. Kaplow suggests prohibiting competing firms from reaching non-competitive outcomes by interdependent conduct, regardless of whether there has

[234] Kaplow, Louis. "On the meaning of horizontal agreements in competition law." *California Law Review* (2011): 716.
[235] Kaplow, Louis. "An economic approach to price fixing." *Antitrust Law Journal* 77 (2010):390.

been communication between them in doing so.[236] Thus, Kaplow recognizes that communication can be useful for firms to reach an agreement, but argues that it should not be part of the legal definition of agreement.

In addition, Kaplow emphasizes that interdependence does not simply mean that rivals are mutually aware of one another's actions. He properly criticizes the common equation of interdependence with 'conscious parallelism', which can mean a simple awareness of others' parallel actions with common external cause – similarly to how pedestrians simultaneously open umbrellas on the same street when the rain begins to fall without the need or presence of any previous communication or collusion between them. Even a competitive firm that raised its prices in response to an increase in the cost of inputs would probably be aware when its rivals also increase prices. In this case, however, the competitive firm takes other firms' behavior as given in choosing its price. A firm acts independently, even if it takes account of its rivals' actions as long as rivals' actions are determined by other external forces. It acts interdependently only if rivals engage in the strategic estimation of each other's choices among a range of possible equilibria in the present and later periods. Therefore, Kaplow claims that the focus of the analysis of price-fixing should be on whether oligopolists set non-competitive prices interdependently in an economic sense.[237] That is if parallel pricing causes supra-competitive pricing in a market, which should be indication of tacit collusion.

Lastly, Professor Kaplow also recognizes that parallel behavior initiated by a dominant firm is independent.[238] He claims that it is normal when smaller firms follow a powerful dominant firm in setting their output at the point at which their marginal cost equals the dominant firm's price. Therefore, Kaplow argues that condemning dominant

[236] Page, William H. "Objective and Subjective Theories of Concerted Action." *Antitrust Law Journal* 79 (2013): 225.
[237] Kaplow, Louis. *Competition policy and price fixing*. Princeton University Press, 2013:33.
[238] Ibid., 349.

firm pricing as a cartel would be as problematic in the manner that it would also be problematic in condemning simple monopoly pricing.

3.3. Conclusion

Oligopolistic conscious parallelism without direct communication constitutes a significant challenge within competition law. Legal scholars have proposed various conceptual definitions of tacit collusion to solve this oligopolistic problem. Concluding from scholarly theories reviewed in the foregoing, the author of this thesis suggests the following definition for *conscious parallelism* and *tacit collusion*:

Conscious parallelism relates to pure oligopolistic interdependent conduct, where firms take no additional steps or actions to communicate or reduce market uncertainty, and act based on mere consideration or calculation of the possible reactions of other firms.

Tacit collusion implies that firms take additional steps or use specific actions to eliminate or reduce market uncertainty in order to achieve price coordination. Such additional actions are not necessarily unlawful, but their misuse may also be considered to amount to tacit collusion.

At this point, it would be useful to present a summary of the most significant scholarly proposals concerning the issue of identification of tacit collusion via facilitating practices. According to the scholars under review, the practice of public price announcements may prove the presence of tacit collusion if:

a) it is used as a signal or invitation to collude;

b) it takes place far in advance without legitimate business justification;

c) it contains more information than is actually necessary for customers to know or is actually of no value to consumers;

d) the making of advance price announcements is not customary for firms;

e) price announcements occur with no legitimate economic factors of cost and demand;

f) there are changes in the frequency, timing, leadership, regularity, effective dates of public announcements;

g) a public price announcement and parallel conduct result in supra-competitive prices;

h) a price initiator is not a dominant firm with a high market share, which could enable it to unilaterally raise prices without risk of losing customers.

Thus, if the conduct goes beyond signaling, where there is both an invitation to collude and acceptance, then it will constitute tacit collusion. This approach should deter competitors from signaling with illegitimate intent. A signal can suggest to an antitrust agency that an unlawful conspiracy has taken place, thus drawing an investigation.

As for remedies, scholars differ in opinion. For instance, Turner favors structural remedies,[239] whereas Lopatka and Bunda prefer behavioral remedies[240] and call for the prohibition of practices that facilitate interdependent pricing.

[239] A structural remedy is defined as a measure that effectively changes the structure of the firm by a transfer of property rights regarding tangible or intangible assets, including the transfer of an entire business unit that does not lead to any ongoing relationships between the former and the future owner.

[240] A behavioral remedy does not eliminate the incentive of the regulated firm to restrict competition and regulate behaviors; such remedies are intended to control the ability of firms to restrict competition. The OECD Council Recommendation on Structural Separation in Regulated Industries. https://www.oecd.org/daf/competition/OECD-Recommendation-on-Structural-separation-regulated-industries.pdf

Obviously, the prohibition of the practice of public announcements can be helpful in reducing collusive attempts of price coordination, but courts and enforcement agencies have recognized that firms may have legitimate reasons to ensure their investors, customers, and suppliers are informed. Therefore, the absolute prohibition of public price announcements may actually harm business relations and therefore fail to be a rational solution for the prevention of tacit collusion. On the other hand, a complicated rule of reason approach in assessing the legitimacy of facilitating practices may, moreover, increase the cost and burden on regulators. Thus, it is preferable to consider alternatives to behavioral remedies as *ex-ante* preventive tools. In this regard, the Japanese reporting system discussed in the following chapter may be instructive.

Chapter 4. THE IMPLICATIONS OF THE FORMER JAPANESE PARALLEL PRICE INCREASE REPORTING SYSTEM

4.1. Background

Japan has recognized the necessity to address the problem of oligopolistic pricing since the 1970s due to the 'Nixon shocks', the Oil Crisis, and the generally poor economic situation as large companies in that period frequently formed many hidden cartels. Along with strengthening the JAMA in 1977, Japan introduced a unique 'parallel price increase reporting system'[241] to tackle tacit collusion. However, after functioning almost for 30 years the reporting system was abolished in 2005. The reporting system serves as a good paradigm for developing countries to learn about the Japanese experience in the regulation of oligopolistic parallel pricing.

By publicizing the reasons for such parallel price elevations, the reporting system was designed to prevent the abuse of power by oligopolistic firms. In the 1970s, there were many cases of parallel price elevations in oligopolistic markets. Oligopolistic parallel pricing in that period has demonstrated the limitations of the JAMA to regulate such market behavior. Even with the mitigating standards for proving cartel conduct and enhancing structural regulations, there were still legal loopholes through which collusion managed to occur. To prevent such collusion, Article 18-2[242] was specifically incorporated by the 1977 amendments of the JAMA.

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[241] The parallel price increase reporting system was pursuant to Article 18 (2) JAMA, which has since been abolished.

[242] The text is as follows: 'Article 18-2 [Reporting requirement on parallel price increases]
(1) If, in any particular field of business where the total value of goods (this term refers to the value of the goods concerned less the amount equivalent to the amount of taxes levied directly on such goods) of the same description supplied in Japan (excluding those exported; hereinafter the same in this section) or the total value of services (this refers to the price of the services concerned less an amount equivalent to the amount of tax levied on the recipients of such services with respect thereto) of the same description supplied in Japan during a one-year period designated by a Cabinet

In the original draft of the provisions related to the reporting system, the JFTC requested that firms should also disclose their cost and price information because oligopolistic interdependence tends to cause simultaneous price elevation in the market. There was an opinion that in a highly oligopolistic market requesting firms to disclose cost and price information may inhibit price elevation by firms due to social pressure and observation, which ultimately might lead to the promotion of competition.[243]

However, the business community opposed the draft, claiming that disclosing the cost and price information would conversely eliminate competition among firms and also deny freedom of pricing. In addition, to examine whether the price set by firms was appropriate or not was the job of the Japanese Fair Trade Commission (JFTC). As

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Ordinance, is in excess of 60 billion yen, the ratio of the total amount of such goods or services supplied by the three entrepreneurs, which rank among the three largest entrepreneurs in Japan in terms of volume of supply (this refers to the quantity of goods or services of the same description which one entrepreneur supplied during a given one-year period, and in case it is not appropriate to be calculated by the quantity, the quantity shall be represented in terms of the value; hereinafter the same meaning in this section) to the aggregate volume of such goods or services of the same description supplied in Japan during such one-year period (hereinafter referred to as "aggregate volume") exceeds seven tenths, and if two or more major entrepreneurs (including the largest one) this term means the five entrepreneurs each of which account for one twentieth or more of the aggregate volume and rank among the five largest entrepreneurs in Japan; hereinafter the same meaning in this section) raise the price they use as the basis of their transactions in such goods or services of the same description by an identical or similar amount or percentage within a period of three months, the Fair Trade Commission may ask such major entrepreneurs for a report furnishing a statement of reasons for such a raise in the price of goods or services: Provided, this all not apply to price increases effected by entrepreneurs whose price of goods services authorized or approved by, or filed with the competent minister in charge of the business in which the said entrepreneurs are engaged (in case such price shall be filed with the competent minister, this shall apply only to such case where the competent minister has the authority to order a change in such price).
(2) In event any change has occurred in the economic conditions resulting in a change in domestic industrial shipments and wholesale prices, the amount of prices as prescribed in the preceding subsection may be revised by virtue Cabinet Ordinance to reflect such change'.

[243] OECD Competition Committee meeting, June 15, 2015. Hearing on Approaches to issues in Oligopoly markets (Contributions from Japan).

a result, it was agreed that only the reporting of the reasons for price elevation should be submitted.[244]

4.1.1. Requirements for a report on parallel price increases

It should be noted that not all parallel pricing patterns were subject to reporting. The following conditions must be satisfied to request firms to report the reasons for the price increase:

a) the total sale of products or services supplies in Japan must exceed 60 billion yen per year;
b) the market must be a highly oligopolistic market;
c) the price increased must be the standard price in the business;
d) the increase in prices must be parallel (for instance, two or more leading enterprises, including the top ranking enterprise, in an oligopolistic market, must have raised the prices of their products by the same or a similar amount or rate within three months);
e) those parties who must report parallel price increases are leading entrepreneurs.

The contents of the report would include information which rationally explained the reason for the price elevation. Moreover, the reporting system was not applicable to all markets; the JFTC would specify the items that fell under the system every fiscal year. For instance, 87 goods and service markets fell within the ambit of Article 18 (2) (1) JAMA in 2004. [245]

The JFTC would gather reports and then send them as the *Annual Report* to the National Diet (i.e., Japan's bicameral legislature), which would publish a *White Paper*

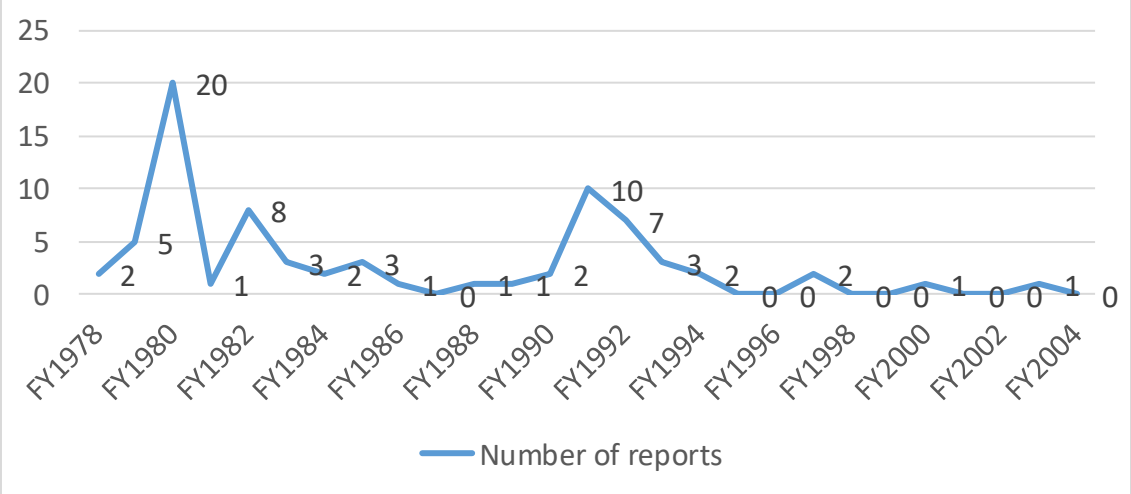
[244] OECD Competition Committee meeting, June 15, 2015. Hearing on Approaches to issues in Oligopoly markets (Contributions from Japan).
[245] JFTC, (1977) as amended December 17, 2004, Appendix 1.

open to the public. In addition to the annual report of the JFTC to the Diet, the JFTC could also make public any such matters it thought necessary to ensure the proper enforcement of the JAMA, with the exception of confidential trade secrets of firms (Article 43 and Article 44-2).[246] By publishing the reasons given by firms for price elevation, the JFTC would thus expose firms to social oversight and criticism, and would hope to encourage self-restraint concerning irrational parallel price increase. Nonetheless, it seems that the reporting system had failed to meet the JFTC's original expectations, which resulted in its subsequent abolition.

4.1.2. Abolition of the reporting system

The reporting requirement was abolished in 2005. Overall, there had been 75 cases during the operation of the reporting system (1978-2005). The reasons for the price elevations provided by firms mainly concerned increases in the cost of raw materials, manufacturing, advertising, and transportation.

Figure 1. The dynamics of the number of reports for parallel price increase FY 1978-2004



[246] http://www.jftc.go.jp/eacpf/05/jicatext/aug31.pdf

Source: Amendment to Anti-monopoly Act in 2005[247]

The reporting system was often criticized for providing limited regulation and for merely appearing to justify collective price increases by firms. For instance, the JFTC solely asked for the economic reasons of the price elevation without examining how firms could come to such joint action. Moreover, the JFCT would not force firms to return to the previous price points when the reasons reported by firms seemed unconvincing. A further criticism of the reporting system is that its main drawback was the late timing of the report justifying the price increase, so it did not have much impact on the firm's behavior.[248] It has long been suggested that due to the changes in corporate awareness that parallel price increases were permissible conduct if no prior collusion existed firms got used to the reporting requirements.[249] That factor ultimately made the reporting system lose its effect, particularly since even if tacit collusion was detected, it could not be punished in time or adequately.

At the time of the abolition of the reporting system, the JFTC provided the following reasons for its decision. The report targeted the parallel price increase at the national market level, however, actual price increases were often implemented at the regional level.[250] The reporting system had created an administrative burden upon firms and had increased the administrative cost of regulators in relation to the costs of investigations.[251] As a result, the 2005 amendment to the JAMA scrapped the reporting

[247]諏訪園 貞明編『平成 17 年改正独占禁止法—新しい課徴金制度と審判・犯則調査制度の逐条解説』（商事法務，2005 年）228 頁。

[248]平林英勝『独占禁止法の歴史（上）』（信山社、2012 年） (History of the Antimonopoly act, 2012)。

[249] 諏訪園 貞明編 『平成 17 年改正独占禁止法—新しい課徴金制度と審判・犯則調査制度の逐条解説 』（商事法務、2005 年）194 頁。

[250] 「価格の同調的引上げに対する報告徴収規定の廃止に伴う所要の措置について」（公正取引委員会、平成１７年５月１７日）。

[251] 諏訪園 貞明 編『平成 17 年改正独占禁止法—新しい課徴金制度と審判・犯則調査制度の逐条解説』（商事法務、2005 年）194 頁。

requirement.[252] Another reason for this was the strengthening of the investigative powers of the JFTC, and the introduction of a leniency program in 2005 that improves the chances of direct evidence of parallel price elevations due to cartel behavior.[253]

This Chapter examines both types of scenarios where public announcement are present or absent. By comparing both scenarios, this chapter draws conclusions on how parallel price elevation works. As for the case study, the present author has selected some cases on price elevation reported by firms to the JFTC under the Reporting system between 1990 and 2003.

4.2. Identification of tacit collusion via reporting system analysis

Invariably, any parallel price increase in oligopolistic markets is likely to take place either in connection to, or in the absence of, a public price announcement. Advance public price announcements take place when one or more firms disclose information publicly to producers, suppliers, and consumers about their future intentions on price changes. Firms may announce price changes in the public domain by a variety of means and methods, including e-mail, television, the radio, or the press, their website, in a press release, while attending a press conference, and the announcement of future plans in an e-mail. Public price announcements are considered to have mixed effects. On the other hand, they may be beneficial for customers, competitors, and the competitive process. In some markets, public price announcements are considered a standard feature, such as in the market for construction materials. It is possible, due to the specific market structure to find advance announcements necessary for the buyers to be able to inform its downstream market about coming changes. On the other hand, public price announcements may reduce the strategic uncertainty on the market and create a focal point for coordination and thus have anti-competitive effects. Public price announcements make it possible for firms to 'check or test the market' to

[252] Stefan Weishaar, Law and Economics Analysis of the Current Japanese Antimonopoly Legislation (2005):6. Available at: http://aslea.org/paper/Weishaar2.pdf

[253] JFTC, *Report of the Study Group on the Antimonopoly Act*, (October 28, 2003). Available at: http://www.jftc.go.jp/en/pressreleases/yearly_2003/oct/2003_oct_28_0.files/2003-Oct-28_0.pdf

coordinate price elevation. The first company to announce its price intentions may want to see if the competitors show any support or indications to follow the plan set out in their announcement. If none of the competing firms follows the announced price, the initiating firm can cancel or postpone the price implementation without any risk of losing market shares or customers. If a sufficient number of rivals have agreed with the announced price, it makes it possible for rivals to coordinate their prices. In other words, firms can use their announcements as communication devices to coordinate their price behavior. When parallel price elevation occurs without any advance public price announcements by firms, the possibility of the existence of advance collusive communication is high unless it has resulted from a common external cause.

There may be two collusive scenarios in public announcement practice. First, when a public price announcement is driven by collusion in advance. A good indication can be price announcements of firms without pre-notification of buyers. Second, when advance public price announcements are used as a 'signal' or an 'invitation to collude.' In such case, one leading firm may notify or agree on a new price with buyers in advance, and then make a public announcement to encourage other firms in favor of a price elevation. However, exactly when price announcements lead to collusion cannot be easily established.

Following the review of scholarly opinion in Chapter 3, it is this author's view that the careful consideration of these factors can be helpful in identifying tacit collusion among firms or, at least, for alerting enforcement authorities to circumstances in which it may be prudent to intervene.

A list of cases of parallel pricing collected in the reporting system of Japan that are helpful in identifying tacit collusion or circumstances meriting investigation has been involved below. Due to the fact that the JFTC's annual reports including parallel price increase reports are publicly available only from FY1989 to FY 2004, the selected

cases relate to that period. Among them, the author has chosen the most relevant and useful cases for the case study.

4.3. Case study

4.3.1. Public announcement scheme

Case 1. Cast iron pipe market[254]

	Public announcement date	Date of notifying buyers	Planned date of the price increase	Implementation date	Price increase rate (%)
Kubota	1990/11/28	1990/10/05	1991/04/01	1991/04/01	8.2
Kurimoto	1990/12/25	After 1991/01	1991/01/05	1991/04/03	8.5
Nippon Steel Pipe	-	End of 1991/01	1991/04/01	1991/04/19	8.4

Market condition: The total market share of the top three companies in the iron pipe market is 81.8%. Kubota is a leading company in the market.

Reason for price increase indicated by companies: In general, all companies have indicated almost similar reasons for the price increase, which is due to the increase of costs concerning raw materials, labor, manufacturing, selling and general administration.

Kubota's reason: The total cost for 1991 might rise by 10.6% per ton in comparison to the 1987 fiscal year.

Kurimoto's reason: The total cost for 1990 (January-September) rose by 6.8 % per ton in comparison with the 1986 fiscal year.

[254] JFTC Annual report for FY 1991.

Nippon Steel pipe's reason: The total cost for 1991 would rise by 11.3 % per ton in comparison with the 1989 fiscal year.

Analysis of the case: In this case, an initiator of the price increase was Kubota. Then, a month later following Kubota, Kurimoto made a public statement on price elevation. However, Nippon Steel Pipe did not make any price announcements and directly notified its buyers. It is unclear why Nippon Steel Pipe Company did not make an advance public price announcement along with rivals, but it may be that it is not customary for Nippon Steel pipe to make a public announcement in advance.

As the table shows, before making public statements on price elevation Kubota, has already negotiated its new price with buyers sending them a notification. Meanwhile, Kurimoto has notified buyers only after publicly announcing its price increase. It is not insignificant that Kubota made a public price announcement after individually notifying its buyers concerning price changes. Usually, firms make public price announcements to inform buyers of forthcoming price changes. If Kubota has already informed its buyers privately, it is difficult to see a legitimate business reason for making a public announcement then. Therefore, it is possible that Kubota had used the public announcement as a 'signal' or an 'invitation to collude.' Next, the change of planned date by Kurimoto to align it with rivals may imply that some sort of interfirm communication had occurred among firms. Furthermore, public announcements had been made far in advance of the implementation date – namely, five months ahead, a fact that supports the inference of tacit collusion in the absence of any legitimate economic reason. Lastly, in order to justify a price increase rate of 8.3 percent on average, each firm takes figures from previous years in the past; probably they were the less profitable years for each firm. In this author's opinion, as the price increase began in 1991, it would be reasonable to compare prices with 1990. Therefore, the enforcement authority would need to check factors of cost and demand to identify whether the price elevation rate is supra-competitive. Thus, this case of price elevation is suspicious and justifies further investigation for tacit collusion. To be

sure, it is necessary to check the content of a price announcement statement for whether it contains more information than what would reasonably be expected for buyers to need.

Case 2. Fish meat ham/sausage in 1990[255]

	Public announcement date	Date of notifying buyers	Planned date of the price increase	Implementation date	Price increase rate (%)
Taiyo	1990/07/27	1990/08/01	1990/09/01	1990/09/01	11.6
Marudai	-	1990/08/17	1990/09/01	1990/09/01	11.3
Nissuicon	1990/07/03	1990/07/02	1990/08/01	1990/08/01	9.9
Toyo	-	1990/09/11	1990/10/01	1990/10/01	11.8
Maruzen	-	1990/09/17	1990/10/21	1990/10/21	12.6

Fish meat ham/sausage in 1991	Public announcement date	Date of notifying buyers	Planned date of the price increase	Implementation date	Price increase rate (%)
Taiyo	-	1991/09/20	1991/10/21	1991/10/21	14.3
Marudai	1991/08/23	1991/08/05	1991/09/02	1991/09/02	16.5
Nissuicon	-	1991/07/05	1991/09/01	1991/09/01	14.6
Toyo	-	1991/10/10	1991/11/01	1991/11/01	16.7
Maruzen	-	1991/11/26	1991/12/01	1991/12/01	12.7

[255]JFTC Annual report for 1990.

Market condition: Top three companies Taiyo, Marudai, and Nissuicon have a market share of 70.4% in total. The leading company in a market is Taiyo.

A common reason for price elevation (1991): Price increase for main ingredients.

Taiyo: As the purchase price of the main ingredients (surimi) rises, the manufacturing cost rose by 17.5% per kg.

Marudai: As the purchase price of the main ingredients (surimi) rises, the manufacturing cost will rise by 31.4% per kg.

Nissuicon: As the purchase price of the main ingredients (surimi) rises, the manufacturing cost rises by 11.3% per kg.

Toyo: As the purchase price and the labor cost of the main ingredients (surimi) increase, the manufacturing cost rises by 19.8% per kg,

Maruzen: As the purchase price, labor costs and overhead expenses of raw materials (surimi, starch) increase, the manufacturing cost rises by 17.5% per kg.

Analysis of the case: First, it becomes quite understandable from the table that the public announcement practice is not customary for the firms, as those firms who made public announcements in 1990 did not make it in 1991 and vice versa. Therefore, it is highly probable that the public announcement has been used as 'signaling' in 1990.

Case 3. Automotive tire/tube market[256]

	Public announcement date	Day of notifying buyers	Planned date of the price increase	Implementation date	Price increase rate (%)

[256] JFTC Annual report for 1991.

Bridgestone	1991/01/28	1991/01/28	1991/02/21	1991/02/21	4.6
Yokohama Rubber	1991/01/10	1991/01/11	1991/02/01	1991/02/01	4.8
Sumitomo Rubber	1990/12/27	1990/12/27	1991/02/01	1991/02/01	5.3
Toyo Rubber	1991/01/16	1991/01/14	1991/02/12	1991/02/12	5.6

Market condition: The total market share of the top three companies is 75.3%. A leading company is Bridgestone. Toyo Rubber has more than 5% of market share.

Reason for the price increase: All four companies have indicated the same reasons for price elevation – namely, increase in costs for raw material (synthetic rubber, carbon black), fuel, and logistics. In particular,

Bridgestone: Without the price increase, the total cost of the automotive tire and tube for the first half of 1991 (January-June) is expected to rise by 5.2% per ton in comparison with the first half of 1990 (January-June).

Yokohama Rubber: Without the price increase, the total cost of the automotive tire and tube for 1991 (January- December) is expected to rise by 6.0% per ton in comparison with 1990 (January- December).

Sumitomo Rubber: Without the price increase, the total cost of the automotive tire and tube for the fiscal year of 1991 is expected to rise by 7.3% per ton in comparison with the fiscal year of 1989.

Toyo Rubber: Without the price increase, the total cost of the automotive tire and tube for the fiscal year of 1991 is expected to rise by 8.0% per ton in comparison with the fiscal year of 1989.

Analysis of the case: In this case, all firms had made public announcements. The time gap between public announcements and implementation dates is short. In

contrast to all three leading firms, only Toyo notified its customers before making a public announcement. The price increase rate of each firm appropriately reflects the cost rate indicated in the reasoning of each firm. These factors probably demonstrate that these firms have been acting under mere oligopolistic interdependence and no tacit collusion is borne by these facts alone.

Case 4. Bus / Truck Chassis market[257]

	Public announcement date	Date of notifying buyers	Implementation date	Price increase rate (%)
Mitsubishi	1991/09/27	1991/09/27	1991/12/01	4.5
Hino	1991/10/02	1991/10/02	1991/11/01	4.9
Isuzu	1991/10/11	1991/10/11	1991/11/01	4.7
Nissan	1991/10/07	1991/10/08	1991/12/20	4.8

Market conditions: Three top companies Mitsubishi, Hino, and Isuzu have 87.2% of the market share in total. The leading company in the market is Mitsubishi.

Common reasons for price elevation: cost increase concerning raw materials (functional parts, cast parts.), outsourcing processing, physical distribution, labor, test research corresponding to emission control regulations, capital investment depreciation etc.

Analysis of the case: The fact that all firms made public announcements prior to the notification of buyers may imply that it was used to mitigate buyer resistance. Furthermore, the public announcements were made far in advance of the implementation date thus making suspicion of tacit collusion justified.

[257] JFTC Annual report for FY 1991.

Case 5. Ventilator market[258]

	Public announcement date	Date of notifying buyers	Planned date of the price increase	Implementation date	Price increase rate (%)
Matsushita Seiko	1992/05/21	1992/02/18	1992/05/21	1992/08/01	8.6
Toshiba	1992/04/01	1992/03/19	1992/07/01	1992/10/01	8.0
Mitsubishi Electric	-	1992/07/24	1992/10/01	1992/10/01	7.3

Market condition: The total market share of the top three companies is 88.1%. Major companies in the market are Mitsubishi Electric, Matsushita Seiko, Toshiba, and Seibu Electric. The leading company is Mitsubishi Electric.

Reasons for the price increase: All firms have common reasons, namely, the rise in costs for materials, logistics, and labor.

Analysis of the case: In this case, both, Matsushita Seiko and Toshiba negotiated with buyers before making public announcements. However, Mitsubishi Electric did not make a public announcement. Price announcements were made far in advance of the implementation date, namely, 3 to 6 months in advance. The fact that all firms changed their initial implementation dates is also suspicious. Therefore, there is good ground for intervention on the part of enforcers.

Case 6. Beer

[258] JFTC Annual report for FY 1993.

	Date of Public announcement/ notifying buyers	Implementation date
Kirin	1994/04/12	1994/05/01
Asahi	1994/04/18	1994/05/01
Sapporo	1994/04/19	1994/05/01
Suntory	1994/04/19	1994/05/01

	New price	Increase amount	Increased rate
Large size bottle (633 ml)	330 yen	10 yen	3.1%
Medium size bottle (500 ml)	280 yen	5 yen	1.8%
Small size bottle (334 ml)	200 yen	5 yen	2.6%
Can (500 ml)	295 yen	10 yen	3.5%
Can (350 ml)	225 yen	5 yen	2.3%

Market condition: The total market share of the top three companies is 89.6%. The leading company is Kirin.

Reasons for the price increase: Since 1 May 1994, the liquor tax on beer has risen to 14,008 yen (including consumption tax) per kilogram.

Analysis of the case: Although the public announcement dates, the implementation dates, and the price increase rates are identical, firms have a legitimate reason for this coincidence. An external factor such as a tax increase on beer products led all firms to react similarly by elevating their prices. There is almost no time gap between their public price announcements and implementation dates. Price rate similarity may be explained by price leadership theory, where in this case a leading firm Kirin had announced first and then other firms followed its price increase rate. Due to the obvious external economic factor, each are likely to have made the same decision for

itself even if its competitors may have decided otherwise, which would imply that no tacit collusion necessarily took place.

Case 7. Instant coffee market

	Public announcement date	Date of notifying buyers	Implementation date	Price increase rate	
				Manufacturers' price	Retailers' price
Nestle Japan	1994/12/05	1994/12/05	1995/01/01	12.89 %	13.11 %
AGF	1994/12/09	1994/12/09	1995/01/01	12.90 %	13.12 %

Market condition: The total market share of just two companies is 84.6%. The leading company is Nestlé Japan followed by AGF.

A common reason for the price increase: The price of raw coffee beans had increased due to frost damage and drought in Brazil during June and July 1994.

Analysis of the case: The facts are similar to the Beer case discussed above. Due to *force majeure* circumstances that had caused a price increase for coffee beans, both companies had to react by elevating their prices accordingly.

4.3.2. Non-announcement parallel pricing scheme

Parallel pricing in an oligopolistic market may also happen without advance public price announcements on the part of firms. In that case, due to the absence of public price announcements, firms face many difficulties in achieving price coordination given that market uncertainty is higher. Therefore, when parallel pricing

occurs in an oligopolistic market, it is a strong indicator for enforcement authorities of the possibility of tacit collusion in the market.

Case 8. Glass bulb for cathode ray tube

	Date of notifying buyers	Planned date of the price increase	Implementation date	Price increase rate (%)
Nippon Electric Glass	1990/09/28	1990/10/01	1991/04/01	5.4
Asahi Glass	1990/10/01	1990/10/01	1991/04/01 (partly on March 21)	5.0

Market condition: The total market share of the two companies is 99.4%. The leading company is Nippon Electric Glass.

A common reason for the price increase: Due to the rise of the cost of raw material (litharge, strontium carbonate), fuel, and logistics.

Analysis of the case: First, it is a highly concentrated duopoly market that facilitates collusion. Second, both firms almost simultaneously notified buyers on the price increase. Also, the initially planned dates, the actual implementation dates, and the price increase rates are identical. It is evident from the above table that the desirable (i.e., planned) date of the price increase had changed from October to April, which may imply the presence of some inter-firm communication.

Case 9. Shine glass market in 1994[259]

[259] JFTC Annual Report for FY 1994.

	Date of negotiation with buyers	The planned day of price increase	Implementation date	Price increase rate (%)
Asahi Glass	May 1994	1994/07/01	1994/06/10	6.6
Nippon Sheet Glass	August 1994	1994/10/01	1994/09/01	4.5
Central Glass	July 1994	1994/08/01	1994/08/01	4.8

Market condition: The total share of the top three companies is 98.6%. The leading company is Asahi Glass.

Reason for the price increase:

Asahi Glass: As the selling price had declined in FY 1994, it could not fully absorb the decrease in selling price.

Nippon Sheet Glass: Overall operating loss in FY 1993 was about 3.2 billion yen. The price increase rate was been set by taking into consideration the price increase situation of the leading company Asahi Glass.

Central Glass: The loss of the company for FY 1993 was 1.2 billion yen.

Analysis of the case: The case is non-collusive. First, the negotiation dates of firms with their respective buyers differ by 3 to 4 months. Also, there are similar time lapses with regard to the implementation dates: Asahi Glass implemented its price on 10 June 1994, while Nippon Sheet Glass and Central Glass in August and September of that year. Furthermore, Nippon Sheet Glass and Central Glass started negotiating their price elevation only after Asahi Glass had practically implemented its price. This implies that Nippon Sheet Glass and Central Glass had become aware of Asahi's intentions to raise prices not earlier than its implementation date. In other words, no communication took place among the firms, but the firms at least acted interdependently. Also, the fact that the price increase rate of the leading company Asahi Glass is much higher than the other two companies, which also weakens assumptions of tacit collusion.

Case 10. Shine glass market in 1999[260]

	Date of negotiation with buyers	Planned date of the price increase	Implementation date	Price increase rate (%)
Asahi Glass	1999/10/07	1999/11/01	1999/11/01	13.22
Nippon Sheet Glass	1999/10/29	1999/12/01	1999/12/01	14.38
Central Glass	November 1999	1999/12/20	1999/12/20	14.46

Market condition: The total share of the top three companies is 92.7%. The leading company is Asahi Glass.

Reason for a price increase:

Asahi Glass: The revenue from plate glass had deteriorated, and the cost of oil as the main input fuel has increased since the Spring of 1999.

Nippon Sheet Glass: The revenue of the flat glass business is low due to a significant decline in selling prices. The price increase rate had been set by taking into consideration the price increase situation of the leading company, Asahi Glass.

Central Glass: Due to a drop in revenue. The price increase rate had been set by taking into consideration the price increase of its rivals.

Analysis of the case: In this case, firms did not cite common reasons for price elevation. In the absence of public announcements, Asahi and Nippon Sheet Glass started negotiating their price elevation almost at the same time (namely, within a month). Although the firms had different implementation dates, the price increase rate was not much different between them. Central Glass started negotiating the price increase only after Asahi Glass has already implemented its price increase, which

[260] JFTC Annual Report for FY 2000.

means Central Glass became aware of Asahi's intention to raise the price on 1 November and only then initiated negotiations with buyers. A suspicious fact concerns how Nippon Sheet Glass was aware of Asahi's intentions on price negotiation with buyers if no public announcements had been made in advance. The oil prices increase took place in the Spring of 1999, but firms only began elevation in October. The reasons mentioned by firms are legitimate but fail in and of themselves to explain how firms could act similarly in the absence of inter-firm communication.

4.4. Assessment and Rehabilitation of reporting system

It is sufficiently recognized in the relevant literature that facilitating practices may have pro-competitive as well as anti-competitive effects. On the one hand, public price announcements may be necessary and rational business conduct to inform customers on future price movements, while on the other, they may also serve as a 'communication, signal or invitation to collude' to coordinate prices. Therefore, when several firms make public announcements causing a parallel pricing situation in a market, it alerts enforcement authorities to the possibility of a price-fixing cartel among firms. Furthermore, if simultaneous parallel price movements occur without advance public announcements, and no legitimate business reason exists, the suspicion of collusion is even greater.

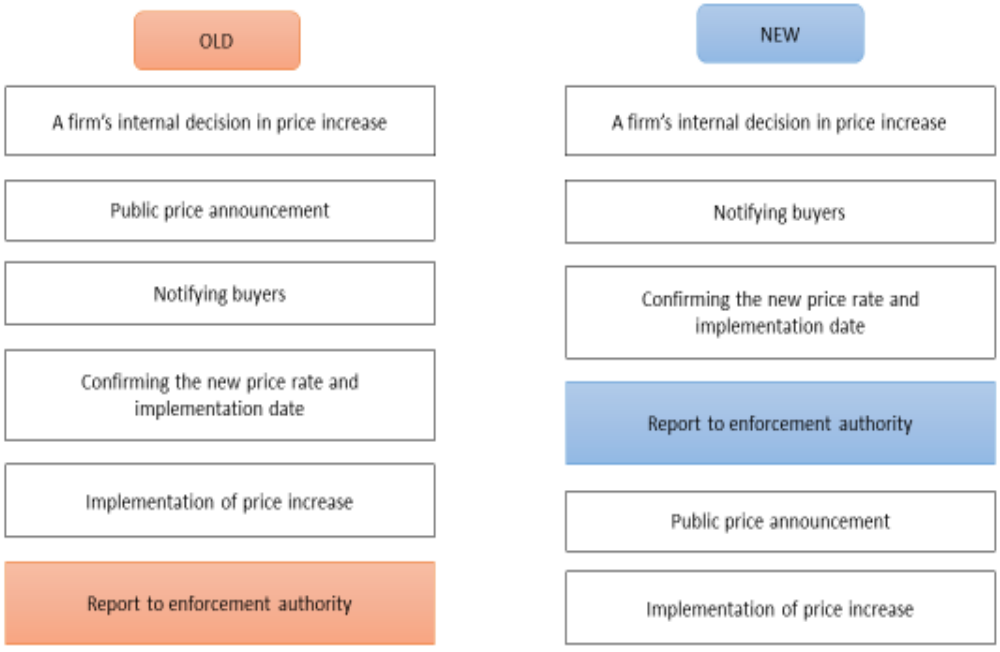
A reporting system can be a useful instrument in collecting the necessary information on parallel pricing schemes in the market. Careful analysis of these schemes may alert regulators to the possibility of collusion among firms. However, when it comes to proof of tacit collusion, the positions of enforcers and courts differ greatly. Courts are reluctant to infer collusion based on circumstantial evidence, and using evidence of facilitating practices may not convince courts.

Furthermore, the former Japanese reporting system had certain defects that undermined its helpfulness in combating tacit collusion. The main purpose of the reporting system had been the prevention of price elevations caused by tacit collusion.

Nonetheless, the reporting system had an ex-*post* character thus making prevention impossible while causing cost and administrative burdens for firms and enforcement authorities alike. What is more, the economic reasons reported by firms were general, with no detailed information to check the legitimacy of the purported reasons for price elevation. Additionally, in that period, it is possible that the Japanese enforcement authority lacked the economic analytical expertise necessary to identify inaccuracies in the reports of firms to expose their collusive actions. However, in this author's view, conditions are different nowadays – modern enforcement authorities including the JFTC have gained the necessary analytical skills to detect imperfections in reports.

Furthermore, a redesigned reporting system can be efficiently workable and supplementary to the leniency program, which if combined may amount to the ultimate tool for the identification of cartels. The present author would propose the following reconstructed reporting system model:

Figure 2. Comparison between old and a redesigned reporting system



As is evident from the figure above, the main structural differences between the two models are as follows: First, unlike the old reporting system, the amended model places an obligation of firms to report planned price elevations to enforcement authorities at the midpoint of the repricing process. Second, firms willing to make public price announcements should do it only after reporting the new price to enforcement authorities. It is necessary to note here that the present author is not in favor of banning the practice of public announcements at all because it can be a significant device to communicate with customers for certain firms and markets. Any price announcements that firms intend to make should be made only after – and never before – submitting the report to enforcement authorities and it is helpful to prevent signaling schemes. It should be noted here that making a public announcement should remain optional. Third, the report to enforcement authorities should be done no later than 30 days before the implementation date. That is, firms should implement the price increase no later than 30 days since submitting their report to enforcement authorities. It should be noted here that the 30-day term of this requirement is advisory/optional that may be lengthened or shortened depending on the specific market and/or enforcement conditions in each jurisdiction concerned.

The *price increase* reporting system proposed in the foregoing is different from the *merger and acquisition* notification system: enforcement authorities do not have a right to veto price elevations, or order a reduction of the price increase rate. However, it may be necessary in cases where there is suspicious price behavior for enforcement authorities to consider a fuller investigation.

With regard to the content of the report, it should be specific and detailed in order for it to be a reliable and valuable source of information. In particular, the reports should provide answers to the following questions:

- What are the legitimate economic reasons for the price increase?
- What is the economic basis for the new price rate?

- Why has this timing been chosen for the price increase?
- Is a public price announcement planned, and, if so, why?

The answer fields on the submission form of the report should be blank. It is advisable that the form should include a warning note concerning price-fixing cartel behavior, and information on the applicable sanctions in such event. Also, the form should mention the opportunity for firms to opt for the leniency program, and its benefits for those who are in collusion but who are considering notifying regulators. Therefore, it would be advisable to have a special form designed for reporting that may be downloadable from the website of enforcement authorities.

In addition, no change in price rate and/or implementation date should be permissible after the report has been submitted to enforcement authorities. If a firm would want to make changes, it would have to submit a separate report and wait for a month for implementation. The demand for resubmission of the report in case of price modification helps to prevent firms from manipulating the reporting system. For instance, Firm A has submitted a report on price elevation and made a public price announcement, but has not implemented it yet. Being aware of Firm A price increase rate, Firm B has also submitted report and make an announcement with a higher price than Firm A did. Firm B is aware that if Firm A will not follow him he has to return to the previous price. Otherwise, Firm B may lose its customers to Firm A due to higher price. If Firm B wants to make a signal to Firm A to follow his higher price, Firm A has to submit a separate report and wait for a month to implement a new price. Waiting a month can be a risky for Firm B as his customers may go to Firm A, whose price is lower than Firm B. Furthermore, Firm A should find an excuse to justify his price change in the new report. Nonetheless, in case when Firm A does not follow Firm B's higher price, for instance, Firm B has to resubmit a report to lower and adjust a price with Firm A's announced price to keep customers in. Thus, reporting system has two indirect effect against tacit collusion. First, a physiologic effect. Price elevation via reporting system makes firms to feel

that regulator is aware of your action and keeps eye on you and any interfirm communication can be easily detected. Second, a whistleblowing effect. When any of Firm A or B in above example makes price modification by resubmitting a report, it gives a warning to enforcement authorities about possible signalling scenario.

Regarding the scope of goods and services that should be subject to the price elevation reporting mechanism, it would be recommended to limit the scope to those oligopolistic markets, where the concern of tacit collusion is high. Such limitation is to avoid too high administrative burden both on firms and enforcing authorities. It is much more advisable because the scope of reporting would be much wider than the original one of Japan as it also applies to unilateral price increase. Thus, the scope of the oligopolistic markets subject to the reporting system can be decided by each jurisdiction depending on the potentiality of tacit collusion schemes in these markets.

In general, the present author considers the advantages of the new reporting system to be as follows:

First, it helps to prevent price signaling and price coordination in oligopolistic markets. A firm may seek to signal its price elevation intentions by publicly announcing its prices. However, if no firm follows it, that firm can merely return to its previous price. The new reporting system does not prohibit the practice of public announcements but allows them only after the report has been submitted to enforcement authorities. After the report has been submitted, no changes in price rate or implementation date are permitted. Therefore, a firm cannot simply return to its previous price after the report has been made to enforcement authorities. Thus, the reporting system significantly limits the opportunity of firms to align their prices.

Second, the reporting system with less effort provides enforcement authorities with the price changing information in the market and its reasons. There are many types of markets and many firms thus making it extremely hard, if not impossible, for enforcement authorities to follow all market activities in order to ensure that all

firms play fairly in the market. Sometimes, due to the lack of information, enforcement authorities react late, by which stage anti-competitive action has already harmed competition in a market. However, the reporting system proposed in the foregoing would allow enforcement authorities to gather essential information on time and effectively respond to prevent any violation of competition rules.

Third, the proposed reporting system reduces investigation costs for competition authorities. This is evident in two ways: a) the content of the report may shorten the time for collecting necessary data and monitoring the market; and b) if a firm submitted fabricated, or unclear information in the report, this fact can be used as evidence of collusion against that firm.

Fourth, the reporting system may stimulate *ex-ante* preventive actions of enforcement authorities by alerting them to possible collusive schemes and thus attracting careful investigation on the part of enforcement authorities. When several firms submit parallel reports with suspicious economic reasons for price elevation, enforcement authorities may initiate the investigation in due course.

Lastly, in case where a firm subject to the reporting procedure fails to submit the report, enforcement authorities would be justified to impose sanctions for this breach. If many firms ignore the reporting procedure and implement parallel price elevations, the case may reasonably be suspected to amount to tacit collusion.

4.5. Lessons for CIS countries including Uzbekistan

Uzbekistan is one of CIS countries under economic transition. During the Soviet era, the economy of Uzbekistan was based on a central command system, which left no place for markets and competition. State ownership, absolute state monopoly, and state price control were the primary tools for the government to regulate the economy. Following independence in 1991, Uzbekistan has chosen to orientate towards a market-based economy with a *gradual transformation* strategy, while only Russia among current CIS

countries has chosen a *shock therapy* to liberalize economy. Within 25 years of implementing transitional regulatory policies, Uzbekistan has achieved a certain level of attainment of a market economy.

In the early years of transition, a government priority had been the regulation of monopolies. Successful state policies on demonopolization have led to a significant drop in the number of monopolies, which, in turn, has led to the creation of numerous new enterprises.[261] A monopolistic environment has gradually been replaced by an oligopolistic and more competitive market, and, therefore, competition policy is now focusing on increasing competition.[262] To ensure competition in such circumstances, in 1996 the Uzbek government enacted a competition law regime including the establishment of a competition authority, namely, the Uzbek Competition Committee (UzCC). The similar policy reforms have taken place in all CIS countries.

Nonetheless, current cartel regulation is not effective in the majority of CIS countries including Uzbekistan. Several problems are hindering successful anti-cartel regulation. First, a shortage financial and human resources[263] is a common issue facing competition enforcement authorities almost in all CIS countries. Particularly, due to the secrecy and complexity of detection and proving a cartel conduct, the Uzbek Competition Committee needs more resources for investigation and regulation. Second, a lack of investigative powers of the UzCC; Article 21 of the Uzbek Competition Law stipulates a list of powers given to the UzCC, where, however, the necessary investigative powers are absent, which,

[261]Center for Improvement of Anti-monopoly Policy, Competition Policy and Anti-monopoly Regulation in Uzbekistan: Analytical report on the development, status, trends and issues of anti-monopoly and competition policy in Uzbekistan in 2000-2009. (2009), 29 (hereinafter referred to as the 'Analytical Report 2009').

[262]岸井 大太郎 , 大槻 文俊 , 和田 健夫 , 川島 富士雄 、向田 直範 , 稗貫 俊文 『経済法：独占禁止法と競争政策』第 8 版、（有斐閣アルマ、2016 年）、259-302 頁。

[263]The 'toothless' Competition Committee is not attractive for workers, while a private sector offers more financial and carrier prosperity. Those who joined the Committee usually do not stay for a long time and leave as soon as possible.(From the author's interview with the Head of the Department of the Competition Committee of the Republic of Uzbekistan, September 16, 2015)

in turn, causes difficulty for the UzCC in obtaining direct evidence against cartels. Third, a poor sanctioning regime for cartel conduct; the competition authority may impose only an administrative surcharge, the maximum amount of which is approximately 400 USD. Also, there is no criminal prosecution for cartel conduct in Uzbekistan. In addition, legal persons were excluded from liability. That is, companies evade responsibility for cartel behavior, but individuals – such as managers, directors, and other company officers – have been made accountable. Therefore, the existing sanctioning regime has no real preventive effect in Uzbekistan.

4.5.1. Regulation of tacit collusion in Uzbekistan

Cartel conduct is prohibited by Article 11 of the Uzbek Competition Law. The law also differentiates between two types of cartel conduct: *concerted practice* and *agreements*. The law defines the terms *concerted action* and *agreement* as follows:[264]

The Regulation[265] lists several types of circumstantial evidence to infer collusion. According to the Regulation, a public price announcement without plausible reasoning for such conduct may be a powerful sign of collusion. In other words, if firms fail to provide a convincing economic explanation for their public price announcements that could be sufficient evidence to infer collusion in Uzbekistan. Furthermore, simultaneous parallel pricing within 30 days can also be considered a strong indicator of possible collusion in a market. Nonetheless, it does not mean that competition authorities may condemn firms solely based on 30 days' parallel pricing or identical pricing.

An evident tacit collusion case is considered to be the *Mobile operator,*[266] where the UzCC had condemned two largest mobile phone companies for forming a price-fixing

[264] Regulation on inferring concerted practice and collusive agreements restricting competition issued by the Cabinet of Ministers. (August 20, 2013 #230).

[265] Annex 3 of the Regulation of the Cabinet of Ministers from August 20, 2013 # 230. Regulation on the procedure for the deterrence of concerted practice and agreements restricting competition par. para.12.

[266]The Report to the Chairman of the Uzbek Competition Committee (in Russian) (the file is in the author's private possession).

cartel in April 2013 solely for the parallel price increases that had occurred within a month of each other. The mobile companies involved rejected allegations of collusion justifying their parallel price elevation by the tax increase for each customer's number. Nonetheless, it seems that for the UzCC it was sufficient that parallel pricing had occurred within 30 days to make a finding of collusion. The case demonstrates that the UzCC established tacit collusion for parallel pricing conduct within 30 days without providing evidence of interfirm communication. Such understanding of tacit collusion may cause 'Type 1'and 'Type 2' errors.[267] That is, if interdependent behavior occurs within 30 days, the regulator automatically considers the parallel behavior as a violation of competition rules even if there is no evidence of collusion and the interdependence is merely due to predictable outcomes in oligopolistic markets, which may cause a 'type 1 error'. As for a 'type 2 error', firms doing a cartel can avoid liability if they keep a more extended time gap (more than 30 days) between their parallel conduct.

4.5.2. Implementation of the reporting system

Currently, Uzbekistan has a registration system for firms with a dominant market position, which also operates almost in all CIS countries.[268] There are two criteria to establish the dominance of firms in Uzbekistan: 1) if a firm possesses a market share greater than 50 percent, it is automatically recognized as dominant; 2) if a firm possesses a market share of 30-50%, where its market share has been stable during a year. According to the registration system, dominant firms included in the register have to report on a quarterly basis to the enforcement agency about prices for its products and services. The current number of dominant firms included in the register is 586.[269] The purpose of the register system is to prevent monopolies from manipulating prices. The enforcement agency can order a firm to change the price in cases it finds

[267] A type I error is to falsely infer the existence of cartel that is not there, while a type II error is to falsely infer the absence of collusion of that is actually present.

[268] Russia, Belarus, Uzbekistan, Tajikistan, Kazakhstan, Azerbaijan, Armenia and Kirgizstan.

[269] https://data.gov.uz/uz/datasets/2117?dp-1-page=30

that a dominant firm has manipulated prices. Dominant firms who disagree with such an order may take their complaint to a court.

In the opinion of this author, such a registration system has several defects. First, it creates a burden for both firms as well as enforcement authorities. Firms have to report four times per year about each price change and enforcement agencies have to check each report to establish whether it is a normal or a monopoly price, which, undoubtedly, results in high investigating costs. Second, the registration system is less apt at combating price-fixing cartels as whether a firm has set a normal or a monopoly price is determined by comparison with prices of rival firms. So, if all firms have raised prices, it is not clear how it can be established whether the price is fair or is a consequence of artificial inflation. Third, there is no requirement for dominant firms to provide in their reports a reason for the price increase; an indication of a new price is all that is required. Fourth, as dominant firms have to report on a quarterly basis when a price change occurs between reporting periods, and if the enforcement authority recognizes it to be a monopolistic inflated price, it would be unreasonable to order a firm to reduce the price as it has already been implemented. Fifth, the register system focuses on the price of dominant firms. However, the pricing of non-dominant firms with substantial market share in oligopolistic markets must be also somehow monitored.

Taking into account the defects of the current registration system of Uzbekistan discussed in the foregoing, this author suggests that the system be amended so that it become more efficient along the lines discussed earlier in connection to the proposed reporting system (See paragraph 4.4. above).

4.5.3. Policy recommendations

Based on the experience of the three advanced regulatory areas and the theoretical analysis presented in the present work, general and specific recommendations for CIS countries including Uzbekistan to deal with oligopoly problem effectively are included in this thesis.

The general recommendations are as follows.

First, it is necessary to endow enforcement authorities with the necessary investigative powers. Investigative powers are an essential tool to identify explicit as well as tacit collusion in a market.

Second, the level of the administrative surcharge should be severe, and not only individual but also corporate liability should be possible. However, when the inference of tacit collusion is based on circumstantial evidence, the administrative fine should be much lower than in cases where there is direct evidence.

Third, this author does not recommend Uzbekistan to criminalize cartel conduct, given that this may in turn require courts to set higher evidentiary standards as per the US experience. Of course, criminalization of cartel conduct could lead to greater take-up of the leniency program, but it may also lead to fewer prosecutions and thus the normalization of tacit collusion within competition law.

Fourth, the strict demand for evidence of inter-firm communication to prove collusive conduct, as is the case in advanced jurisdictions, may cause difficulties in detecting concealed cartels in oligopolistic markets in CIS countries, which have shortage of resources and expertise. The overview of the experience of the US, the EU and Japan has showed that advanced jurisdictions face substantial challenges in identification of tacit collusion. If advanced countries struggle to combat price-fixing collusions even having sufficient resources, there is no way for CIS countries then. Therefore, the dissertation concludes that until CIS countries gain some experience and enhance enforcement institutions in terms of human and financial resources, it is advisable to apply *rebuttable presumption*[270] approach in dealing with cartels. It

[270] A rebuttable presumption is an assumption that is taken to be true unless someone comes forward to contest it and prove otherwise.

implies that in case when parallel action occurs in oligopolistic markets, the burden of proof rests on the firms' shoulders. For example, the firms which have simultaneously raised prices are presumed price-fixers unless sufficient proof of non-cartel conduct is provided by firms. Furthermore, it is proposed that tacit collusion be defined as described in Chapter 3.

4.6. Concluding remarks

This dissertation draws the following conclusions concerning the issue of tacit collusion:

First, the definition of *cartel* should include not only *explicit* but also *implicit* (i.e., *tacit*) *collusion*. This dissertation demonstrates the competition laws of three advanced jurisdictions had originally been intentionally designed to include tacit collusion, which is covered by the notions of *combination*, *conspiracy*, or *concerted practice*. Nonetheless, the absence of a precise definition of tacit collusion and its, at times, confusing and contradictory interpretation by courts has resulted in the exclusion of tacit collusion from the definition of cartel conduct.

Second, tacit collusion doctrine should be applicable only in oligopolistic markets. In markets with many firms, cartel cases should be considered based on the doctrine of the explicit cartel, which implies a strong requirement for the evidence of explicit and direct communication. This is because price coordination in markets with many firms is difficult to occur without direct interfirm communication due to high market uncertainty.

Third, the notions of tacit collusion and conscious parallelism should not be equal in legal meaning and effect. Conscious parallelism is the behavioral outcome when firms take no steps to communicate by indirect means. Meanwhile, tacit collusion is when firms achieve price coordination by indirect or implicit communication.

Fourth, no direct communication/agreement should be required to prove tacit collusion. However, the mere presence of some facilitating practice should not be

sufficient evidence to establish interfirm communication. It is necessary to prove that any facilitating practice present is used for purposes of signaling or invitation to collude, which can be established through carefully examining the content and method of the facilitating practice/s present in a case.

Fifth, the implementation of a reporting system can serve as an effective tool to prevent and identify tacit collusion in the oligopolistic market along with the leniency program. The modified reporting system (proposed previously in this thesis) is suited to making price signaling efforts difficult to occur given that any public price announcements intended on the part of firms are only permissible after the report has been submitted by them to enforcement authorities. Furthermore, the proposed reporting system informs enforcement authorities of potential price elevations in essential sectors of oligopolistic markets, which reduces the scope for firms to secretly achieve price coordination.

Bibliography

Books

Alison Jones, Brenda Sufrin, *EU Competition Law. Text, Cases, and Materials*, Fifth Edition, Oxford University Press, 2016

Beaton-Wells, Caron, and Christopher Tran, eds. *Anti-cartel Enforcement in a Contemporary Age: Leniency Religion*. Bloomsbury Publishing, 2015

Buccirossi, P., 'Facilitating Practices', Buccirossi, P. (ed.), *Handbook of Antitrust Economics*, The MIT Press (2008).

Carlton, Dennis W., and Jeffrey M. Perloff. *Modern Industrial Organization*. Boston: Pearson-Addison Wesley, 2005

Dabbah, Maher M. *International and comparative competition law*. Cambridge University Press, 2010.

Duns, John, Arlen Duke, and Brendan Sweeney, eds. *Comparative Competition Law*. Edward Elgar Publishing, 2015.

Filippelli, Marilena. *Collective Dominance and Collusion: Parallelism in EU and US Competition Law*. Edward Elgar Publishing, 2013.

Furse, Mark. *Competition Law of the EC and UK*. No. 6th ed. Oxford University Press, 2008.

Gellhorn, Ernest, William Kovacic, and Stephen Calkins. *Antitrust law and economics in a nutshell*. West Academic, 2004.

Graham, Edward Montgomery, and J. David Richardson. *Global competition policy*. Peterson Institute, 1997.

Holt, Charles A. "Industrial organization: A survey of laboratory research." *The handbook of experimental economics* 349 (1995).

Kameoka, Etsuko. *Competition Law and Policy in Japan and the EU*. Edward Elgar Publishing, 2014.

Kaplow, Louis. *Competition policy and price fixing*. Princeton University Press, 2013.

Kaysen, Carl. *Antitrust policy: an economic and legal analysis [by] Carl Kaysen and Donald F. Turner*. Cambridge: Harvard University Press., 1959.

Matsushita, Mitsuo. *International Trade and Competition Law in Japan*. OUP Catalogue, 1993.

Motta, Massimo. *Competition policy: theory and practice*. Cambridge University Press, 2004.

Richard A. Posner, *Antitrust Law*, 2d ed., University of Chicago Press,. (2001).

Ritter, Lennart, and W. David Braun. *European competition law: a practitioner's guide*. Kluwer Law International, 2004.

Steven H.Gifis, *Law Dictionary*, 6th edition, Barron's, 2010.

Stroux, Sigrid. *US and EC oligopoly control*. Kluwer Law International, 2004.

Whish, Richard, and DAVID BAILEY. "Competition Law 5th." *London: LexisNexis* (2003): 716.

岸井 大太郎 , 大槻 文俊 , 和田 健夫 , 川島 富士雄 、向田 直範 , 稗貫 俊文 『経済法：独占禁止法と競争政策』第 8 版、（有斐閣アルマ、2016 年）。

根岸哲『独占禁止法の基本問題』（有斐閣、1990 年）。

諏訪園 貞明 編『平成 17 年改正独占禁止法―新しい課徴金制度と審判・犯則調査制度の逐条解説』（商事法務、 2005 年）。

正田彬『全訂独占禁止法 1』（日本評論社、1980 年）。

土田和博 , 岡田外司博『独占禁止法の国際的執行: グローバル時代の域外適用のあり方』（日本評論社、 2012 年）。

平林英勝『独占禁止法の歴史（上）』（信山社、2012 年）

Journal articles

Albors-Llorens, Albertina. "Horizontal agreements and concerted practices in EC competition law: Unlawful and legitimate contacts between competitors." *The Antitrust Bulletin* 51, no. 4 (2006).

Arai, Koki. "Indirect evidence in Japanese cartel control." *IIC-International Review of Intellectual Property and Competition Law* 46, no. 3 (2015)

Arquit, Kevin J. "The Boundaries of Horizontal Restraints: Facilitating Practices and Invitations to Collude." *Antitrust Law Journal* 61 (1992)

Atsushi Yamada, Recent Development in Japanese Cartel Enforcement –Time for a Change?, Competition Policy International, Inc.2016. Available at: https://www.competitionpolicyinternational.com/wp-content/uploads/2016/10/CPI-Chronicle-Yamada-FINAL.pdf

Blechman, Michael D. "Conscious Parallelism, Signalling and Facilitating Devices: The Problem of Tacit Collusion Under the Antitrust Laws." *New York Law School Law Review* 24 (1978).

Bunda, Matthew M. "Monsanto, Matsushita, and Conscious Parallelism: Towards a Judicial Resolution of the Oligopoly Problem." *Washington University Law Review* 84 (2006).

Calvani, Terry. "Book Review: The Boundaries of EC Competition Law: The Scope of Article 81." *The Antitrust Bulletin*, Vol 51, Issue 4, (2006).

Catarina Moura Pinto Marvão, "The EU Leniency Programme and Recidivism." (2014). *Available at SSRN 2491172, 2014. 21*

Choe, Chang-Su. "Antitrust Economics for Proof of Concerted Price-Fixing: Practical Points for the US and Korean Antitrust Jurisprudence." *International Law & Management Review* 8 (2011).

Coate, Malcolm B., Should Economic Theory Control Price Fixing Analysis? (April 10, 2014). Available at SSRN: https://ssrn.com/abstract=2103359

Comanor, William S., and Mark A. Schankerman. "Identical bids and cartel behavior." *The Bell Journal of Economics* (1976).

Connor, John M., and Robert H. Lande. “The size of cartel overcharges: implications for US and EU fining policies.” *The Antitrust Bulletin* 51, no. 4 (2006).

DeSanti, Susan S., and Ernest A. Nagata. "Competitor communications: Facilitating practices or invitations to collude-an application of theories to proposed horizontal agreements submitted for antitrust review." *Antitrust Law Journal* 63 (1994).

Dibadj, Reza. "Conscious Parallelism Revisited." *San Diego Law Review* 47 (2010).

Donald F. Turner, “The Definition of Agreement Under the Sherman Act: Conscious Parallelism and Refusals to Deal”, 75 *Harvard Law Review*. 655 (1962):664.

Donald F. Turner, The Scope of Antitrust and Other Economic Regulatory Policies, 82 Harvard Law Review 1207, 1230 (1969).

Edgar L.Feige, “The transition to a market economy in Russia: property rights, mass privatization and stabilization,” *A fourth way* (1994).

Guerrin, Maurice, and Georgios Kyriazis. "Cartels: proof and procedural issues." *Fordham International Law Journal* 16 (1992):274.

Hawk, Barry E., and Giorgio A. Motta. "Oligopolies and Collective Dominance: A Solution in Search of a Problem." (2008):71. Treviso Conference on Antitrust Between EC Law and National Law, Eighth Edition; Fordham Law Legal Studies Research Paper No. 1301693. Available at SSRN: https://ssrn.com/abstract=1301693

Hay, Oligopoly. "Shared Monopoly and Antitrust Law," 67 *Cornell Law Review* 439 (1982).

Ivaldi, Marc, B. Jullien, P. Rey, P. Seabright, and J. Tirole. "The Economics of Tacit Collusion. Final Report for DG Competition, European Commission." *IDEI, Toulouse (http://europa. eu. int/comm/competition/mergers/review/the_economics_of_tacit_collusion_en. pdf)* 4 (2003).

Iyori, Hiroshi. "A Comparison of US-Japan Antitrust Law: Looking at the International Harmonization of Competition Law." *Pacific Rim Law & Policy Journal* 4 (1995).

Joshua, Julian M., and Sarah Jordan. "Combinations, concerted practices and cartels: adopting the concept of conspiracy in European Community competition law." *Northwestern Journal International Law & Business.* 24 (2003).

Kaplow, Louis. "An economic approach to price fixing." *Antitrust LJ* 77 (2010): 343.

Kaplow, Louis. "Direct versus communications-based prohibitions on price fixing." *Journal of Legal Analysis* 3, no. 2 (2011): 466

Kaplow, Louis. "On the meaning of horizontal agreements in competition law." *Calif. L. Rev*. 99 (2011): 683.

Kestenbaum, Lionel. "What is Price Signalling and Does it Violate the Law." *Antitrust LJ* 49 (1980): 911.

Kovacic, William E. "An integrated competition policy to deter and defeat cartels." *The Antitrust Bulletin* 51, no. 4 (2006): 813.

Kovacic, William E. "The identification and proof of horizontal agreements under the antitrust laws." *Antitrust Bull.* 38 (1993): 5.

Kovacic, William E., Robert C. Marshall, Leslie M. Marx, and Halbert L. White. "Plus factors and agreement in antitrust law." *Mich. L. Rev*. 110 (2011): 393.

Lopatka, John E. "Solving the oligopoly problem: Turner's try." *Antitrust Bull.* 41 (1996): 843.

Marks, Randall David. "Can Conspiracy Theory Solve the Oligopoly Problem." *Md. L. Rev*. 45 (1986): 387.

Masuda, Tatsuyoshi. "Exchange of Price Information and the Japanese Anti-Monopoly Law." *Economic journal of Hokkaido University* 32 (2003): 25.

Okada, Yosuke. "How to fight hard core cartels? Analysis of the case on collusion in Industrial Economics." *Journal of Industry, Competition and Trade* 5, no. 3-4 (2005).

Page, William H. "A neo-Chicago approach to concerted action." *Antitrust LJ* 78 (2012): 173.

Page, William H. "Objective and Subjective Theories of Concerted Action." *Antitrust LJ* 79 (2013): 215.

Piraino Jr, Thomas A. "Regulating Oligopoly Conduct Under the Antitrust Laws." *Minn. L. Rev*. 89 (2004): 9.

Richard A. Posner, Oligopoly and the Antitrust Laws: A Suggested Approach, 21 *Stanford Law Review* (1968). 1582.

Rodger, Barry J. "The Oligopoly Problem and the Concept of Collective Dominance: EC Developments in the Light of US Trends in Antitrust Law and Policy." *Colum. J. Eur. L.* 2 (1995): 25.

Rosenthal, Douglas E., and Mitsuo Matsushita. "Competition in Japan and the West—Can the Approaches be Reconciled?." *World Competition* 19, no. 3 (1995): 5-27.

Seryo Shingo, Cartel and Bid Rigging, Training Course on Competition Law and Policy, Japan International Cooperation Agency, 2004:8. Available at: http://www.jftc.go.jp/eacpf/05/jicatext/aug31.pdf

Simon Vande Walle, Tadashi Shiraishi, Competition Law in Japan, January 1, 2015, http://papers.ssrn.com/sol3/papers.cfm?abstract_id=2219881

Stanbury, W. T., and G. B. Reschenthaler. "Oligopoly and conscious parallelism: Theory, policy and the Canadian cases." *Osgoode Hall Law Journal* 15 (1977).

Stigler, George J. "A theory of oligopoly." *Journal of Political Economy* 72, no. 1 (1964).

Turner, Donald F. "The definition of agreement under the Sherman Act: Conscious parallelism and refusals to deal." *Harv. L. Rev*. 75 (1961): 655.

Vaska, Michael K. "Conscious parallelism and price Fixing: Defining the boundary." *The University of Chicago Law Review* 52, no. 2 (1985): 508.

Walle, Simon AW Vande. "Masako Wakui, Antimonopoly Law: Competition Law and Policy in Japan." *Zeitschrift für Japanisches Recht* 15, no. 29 (2010).

Weishaar, Stefan. "Law and Economics Analysis of the Current Japanese Antimonopoly Legislation." (2005). Available at: http://aslea.org/paper/Weishaar2.pdf

Wiliam E.Kovaic, "Institutional Foundations for Economic Legal Reform Transition Economies: The Case of Competition Policy and Antitrust Enforcement," *Chicago-Kent Law Review* 77 (2001).

Kovacic, William E., Robert C. Marshall, Leslie M. Marx, and Halbert L. White. "Plus factors and agreement in antitrust law." *Mich. L. Rev*. 110 (2011): 393.

Zellmer, Joseph F. "Detecting Collusion in Oligopolistic Industries: A Comparison and Proposal." *Hastings Int'l & Comp. L. Rev*. 6 (1982): 829.

和田健夫「不当な取引制限の成立と立証 (上)」『商学討究 』45 巻 3 号 (1995) 113 頁。

和田健夫「不当な取引制限の成立と立証 (下)」『商学討究』47 巻 2/3 号 (1997) 147 頁。

Websites

JFTC Homepage www.jftc.go.jp

UzCC Homepage www.gkk.uz

RFAS Homepage www.fas.gov.ru

Kazakhstan Antimonopoly Committee Homepage www.kremzk.gov.kz

Kirgizstan Antimonopoly Committee Homepage www.antimonopolia.kg

Armenia Antimonopoly Committee Homepage www.competition.am

EU Commission Homepage www.ec.europa.eu

OECD Homepage www.oecd.org

ICN Homepage www.internationalcompetitionnetwork.org