

No. 14-1122

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IN THE  
SUPREME COURT OF THE UNITED STATES

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MOTOROLA MOBILITY LLC,

*Petitioner,*

vs.

AU OPTRONICS CORPORATION, et al.,

*Respondents.*

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On Petition for a Writ of Certiorari  
to the United States Court of Appeals for the  
Seventh Circuit

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**BRIEF OF *AMICUS CURIAE*  
ECONOMISTS AND PROFESSORS IN  
SUPPORT OF PETITIONER**

Delmer R. Mitchell  
*Counsel of Record*  
SCHMIEDESKAMP, ROBERTSON,  
NEU & MITCHELL LLP  
525 Jersey St.  
Quincy, IL 62301  
(217) 223-3030  
[dmitchell@srnm.com](mailto:dmitchell@srnm.com)

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- Peter Bryant and E. Woodrow Eckard, "Price Fixing: The Probability of Getting Caught," *Review of Economics and Statistics* 73 (1991): 531–536..... 19
- Dennis Carlton and Jeffrey Perloff, *Modern Industrial Organization*, Addison Wesley (2005, 4th ed.) at 131 and 131 n. 9..... 14
- Emmanuel Combe, Constance Monnier, and Renaud Legal, "Cartels: The Probability of Getting Caught in the European Union," Bruges European Economic Research Paper 12 (2008) at 17, <https://www.coleurope.eu/sites/default/files/research-paper/beer12.pdf>..... 19
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- John Connor, "Effectiveness of Antitrust Sanctions on Modern International Cartels," *Journal of Industry, Competition and Trade* 6 (2006) at 199 and 208–212 .....16, 17

- John Connor, *Global Price Fixing*, Kluwer Academic Publishers, (2007, 2nd and revised ed.) at 330-335 and 426–430 ..... 18
- John Connor and Robert Lande, “How High Do Cartels Raise Prices? Implications for Optimal Cartel Fines,” *Tulane Law Review* (2005): 513–570 at 541 ..... 18
- Jonathan Eaton and Samuel Kortum, “Technology, Geography, and Trade,” *Econometrica* 70 (2002): 1741–1779 ..... 28
- Eleanor Fox, testimony before the Antitrust Modernization Commission (Feb. 15, 2006) at 11, [http://govinfo.library.unt.edu/amc/commission\\_hearings/pdf/Statement\\_Fox\\_final.pdf](http://govinfo.library.unt.edu/amc/commission_hearings/pdf/Statement_Fox_final.pdf) ..... 17
- Douglas Ginsburg and Joshua Wright, “Antitrust Sanctions,” *Competition Policy International* 6 (2010): 3–39 at 4–5, 7–8 and 17–22.....15, 19, 21
- Gordon Hanson, Raymond Mataloni Jr., and Matthew Slaughter, “Vertical Production Networks in Multinational Firms,” *Review of Economics and Statistics* 87 (2005): 664–678..... 24

- Joseph Harrington, “Penalties and the Deterrence of Unlawful Collusion,” *Economics Letters* 124 (2014): 33–36 ..... 15
- International Competition Network (“ICN”), “Defining Hard Core Cartel Conduct, Effective Institutions, Effective Penalties,” *Building Blocks for Effective Anti-Cartel Regimes*, 1 (2005) at 1, 5.....15, 19, 22
- Alvin Klevorick & Alan Sykes, “United States Courts and the Optimal Deterrence of International Cartels: a Welfarist Perspective on *Empagran*,” in Eleanor Fox and Daniel Crane (eds.), *Antitrust Stories*, Foundation Press (2007), <http://dido.econ.yale.edu/P/cd/d16a/d1617.pdf>..... 11
- Paul Krugman, “Increasing Returns and Economic Geography,” *Journal of Political Economy* 99 (1991): 483–499 ..... 23
- Robert Lande and Joshua Davis, “Comparative Deterrence from Private Enforcement and Criminal Enforcement of the U.S. Antitrust Laws,” *Brigham Young University Law Review* (2011): 315–390 at 319 and 338 n. 82 ..... 13
- Margaret Levenstein and Valerie Suslow, “What Determines Cartel Success?,” (2002) at 19, [http://scholarworks.umass.edu/cgi/viewcontent.cgi?article=1091&context=econ\\_workingpaper](http://scholarworks.umass.edu/cgi/viewcontent.cgi?article=1091&context=econ_workingpaper) ..... 18



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Nathan Miller, “Strategic Leniency and Cartel Enforcement,” <i>American Economic Review</i> 99 (2009): 750–768 .....	19
Walter Nicholson. <i>Microeconomic Theory</i> , Thomson-Southwestern, (2005, 9th ed.) at 335–336 .....	11
Roger Noll, “The DRAM Antitrust Litigation,” in John Kwoka, Jr. and Lawrence White (eds.), <i>The Antitrust Revolution</i> , Oxford University Press (2013, 6th ed.).....	20

Organization for Economic Co-operation and Development (“OECD”), <i>Fighting Hard Core Cartels: Harm, Effective Sanctions and Leniency Programmes</i> (2003) at 85.....	14
Organization for Economic Co-operation and Development (“OECD”), <i>Hard Core Cartels: Recent Progress and Challenges Ahead</i> (2003) at 7, 25, 35, 37 and 51, n. 13 and n. 14.....	18, 22
Organization for Economic Co-operation and Development (“OECD”), <i>Hard Core Cartels: Third Report on the Implementation of the 1998 Council Recommendation</i> (2005) at 12, 25 .....	18, 22
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- Lynne Pepall, Dan Richards, and George Norman, *Contemporary Industrial Organization: A Quantitative Approach*, John Wiley & Sons (2011, 1st ed.) at 236..... 14
- Gregory Tassej, “Competing in Advanced Manufacturing: The Need for Improved Growth Models and Policies,” 28 *Journal of Economic Perspectives* (2014): 27–48 at 30.....24, 25
- U.S. Department of Justice and the Federal Trade Commission, *Horizontal Merger Guidelines*, August 19, 2010, § 4.2.2 (Geographic Markets Based on the Locations of Customers) ..... 10
- Paul Victor, “Export Cartels: An Idea Whose Time Has Passed,” *Antitrust Law Journal* 60 (1991): 571–581 at 571 ..... 26
- Dina Waked, “Do Developing Countries Enforce Their Antitrust Laws? A Statistical Study of Public Antitrust Enforcement in Developing Countries,” (2011) at 3, <http://ssrn.com/abstract=2044047> ..... 26
- Gregory Werden, Scott Hammond, and Belinda Barnett, “Deterrence and Detection of Cartels: Using All the Tools and Sanctions,” *Antitrust Bulletin* 56 (2011): 207–234, <http://www.justice.gov/atr/public/speeches/283738.pdf>.....6, 13, 15, 19

Gregory Werden, "Sanctioning Cartel Activity:  
Let the Punishment Fit the Crime," *European  
Competition Journal* 5 (2009): 19-36,  
[http://www.justice.gov/atr/public/articles/  
240611.htm](http://www.justice.gov/atr/public/articles/240611.htm)..... 6

Kei-Mu Yi, "Can Vertical Specialization Explain  
the Growth of World Trade?," *Journal of Political  
Economy* 111 (2003): 52-102 ..... 28

**INTEREST OF THE *AMICUS CURIAE*<sup>1</sup>**

*Amici* are professors and scholars who teach and write on economic issues and are concerned about the effectiveness of U.S. antitrust laws in protecting American consumers and businesses. They are:

- John Asker, Professor of Economics, University of California, Los Angeles;
- Timothy Bresnahan, Landau Professor in Technology and the Economy, Stanford University;
- John M. Connor, Professor Emeritus, Purdue University;
- Jonathan Eaton, William R. Rhodes Professor of International Economics, Brown University;

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<sup>1</sup> Counsel of record for all parties received timely notice of the intent to file this brief, and it is filed with the consent of both the Petitioner and the Respondents. No counsel for a party authored this brief in whole or in part, no counsel or any party made a monetary contribution intended to fund the preparation or submission of the brief, and there are no persons or entities (other than the *amici* or their counsel), who made any monetary contribution to the preparation or submission of the brief.

- Joseph Harrington, Patrick T. Harker Professor, The Wharton School, University of Pennsylvania;
- Ali Hortacsu, Ralph and Mary Otis Isham Professor of Economics, University of Chicago;
- Roger Noll, Professor Emeritus of Economics, Stanford University;
- Ariel Pakes, Thomas Professor of Economics, Harvard University;
- Robert Porter, William R. Kenan, Jr. Professor of Economics, Northwestern University;
- James Roberts, Associate Professor of Economics, Duke University;
- Andrew Sweeting, Associate Professor of Economics, University of Maryland, College Park; and
- Abraham Wickelgren, Bernard J. Ward Centennial Professor, University of Texas School of Law.

Various of the *amici* have taught, researched, and/or published analyses of the economics of cartels and the effect of government policy on the incentive to engage in price-fixing behavior. *Amici* file this brief solely as individuals and not on behalf of the institutions with which they are affiliated. None of the *amici* represents or is employed by any party in this action.<sup>2</sup>

### INTRODUCTION AND SUMMARY OF ARGUMENT

This brief analyzes economic policy issues surrounding a cartel's delivery of price-fixed inputs incorporated into finished products imported to the United States. Allowing plaintiffs in Motorola's circumstances to pursue claims under U.S. antitrust law would further two economic policy goals: to deter cartels and to promote the efficient use of international supply chains relied upon by U.S. companies and consumers. The circumstances in which Motorola finds itself are increasingly common in today's interconnected global economy, namely, a U.S. company that owns and controls

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<sup>2</sup> Motorola identified one of the *amici*, Dr. Pakes, as a possible expert witness in this litigation because of his position as a recognized, leading authority in the field of economics and the specific issues presented by this case. Motorola did not, however, retain or compensate Dr. Pakes in connection with this litigation.

foreign subsidiaries as part of its supply chain finds itself victimized by a global cartel. Consequently, both effective cartel deterrence and the efficient use of international supply chains are policy goals of exceptional public importance.

The Seventh Circuit's decision fails to consider the adverse effects it would have on these two economic policy goals. Regarding deterrence, the decision asks, "are we to *presume* the inadequacy of the antitrust laws of our foreign allies?"<sup>3</sup> No presumption is necessary: antitrust penalties toward international cartels are collectively inadequate to deter international cartels, in part because many nations do not even have laws against international price-fixing cartels. The decision of the Seventh Circuit asserts that U.S. firms must be forced to choose between using foreign subsidiaries to organize efficient supply chains or enjoying the protection of U.S. antitrust law against monopoly pricing by input cartels.<sup>4</sup> Economic logic counsels against exacerbating inadequate international cartel deterrence and discouraging the efficient use of international supply chains. Instead, economic logic counsels that victims such as Motorola should be permitted to pursue a claim under U.S. antitrust laws to deter

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<sup>3</sup> *Motorola Mobility LLC v. AU Optronics Corp.*, No. 14-8003 (7th Cir.) (Jan. 12, 2015) at 17 (emphasis in original).

<sup>4</sup> *Id.* at 8–9, 22.



the formation of cartels that harm U.S. consumers and businesses by harming U.S. domestic and import commerce and to promote the efficient use of international supply chains relied upon by U.S. companies to provide goods to U.S. consumers.

It is generally recognized that the primary focus of U.S. antitrust laws is to deter behaviors

that harm U.S. commerce.<sup>5</sup> In international markets where products move relatively freely, a successful price-fixing cartel must take into account product flows between regions. If a price-fixing cartel tries to raise prices in only one region of a larger geographic market, market forces will reallocate sales so as to restrain the effectiveness of any region-specific price increase. As a result, an international cartel that operates in a global geographic market (as appears to be the case with LCDs) has an incentive to increase both U.S. and non-U.S. prices.<sup>6</sup>

Relatedly, when facing multinational buyers who procure an input in several regions, a cartel may be forced to fix prices in all regions in order to prevent that buyer from using its multinational

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<sup>5</sup> See, e.g., *Pfizer, Inc. v. Gov't of India*, 434 U.S. 308, 314 (1978); John Connor, "Extraterritoriality of the Sherman Act and Deterrence of Private International Cartels" (2004); Gregory Werden, Scott Hammond, and Belinda Barnett, "Deterrence and Detection of Cartels: Using All the Tools and Sanctions," *Antitrust Bulletin* 56 (2011): 207–234 ("Werden, Hammond, and Barnett"); and Gregory Werden, "Sanctioning Cartel Activity: Let the Punishment Fit the Crime," *European Competition Journal* 5 (2009): 19–36.

<sup>6</sup> This discussion is intended to describe the basic economics of how foreign cartels which sell into a global geographic market harm U.S. commerce. It is not intended to endorse a generally-applicable international arbitrage theory of recovery for all foreign purchases in such a market.

organization to undermine the profitability of the cartel. For instance, had the LCD conspirators attempted to limit their conspiracy to regions outside the United States, U.S. companies would have had a strong financial incentive to purchase LCD panels in the United States at the lower U.S. prices and supply those panels to their foreign subsidiaries themselves. Therefore the LCD conspirators had an incentive to increase prices in all regions that U.S. multinational buyers operated, including the United States. Consistent with this incentive, Motorola alleges that it was targeted in the United States given that it sold a substantial share of U.S. mobile phones, that it agreed to pay a single artificially inflated price for LCDs purchased from the cartel, and that it used that single price throughout its global supply chain.<sup>7</sup>

An important economic question presented by the Seventh Circuit's decision is whether precluding foreign subsidiaries of U.S. companies from pursuing a claim under U.S. antitrust laws against members of a global cartel will promote or undermine the formation of cartels that unquestionably harm U.S. commerce.

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<sup>7</sup> Petition for a Writ of Certiorari, *Motorola Mobility LLC v. AU Optronics Corp.*, No. 14-1122 (S.C.) (Mar. 16, 2015) at 5 and 23-24.

The histories of many examples of international price-fixing cartels, including the vitamins, lysine, citric acid, graphite electrodes, air cargo, DRAM, LCDs, CRTs, and automotive parts cartels, illustrate that there is already inadequate total deterrence to protect U.S. commerce from global price-fixing cartels. Given that antitrust enforcement outside the United States is less aggressive, and hence penalties significantly lower than in the United States, non-U.S. gains from a conspiracy often can outweigh even the maximum possible criminal and civil financial sanctions available within the United States and abroad.

A focus on deterring formation of international cartels is particularly important in view of the fact that deterrence of such cartels is weak in practice. This weakness is illustrated by the fact many companies caught participating in international cartels are serial offenders. These companies repeatedly form and participate in cartels and are apparently undeterred by current enforcement policy. As long as the gap between the expected costs and benefits of forming a cartel is large, which is more likely to be the case when cartels are international in scope and antitrust enforcement outside the United States is less aggressive, firms will have an incentive to engage in price-fixing behavior that harms U.S. consumers and businesses.

Moreover, the Seventh Circuit's ruling is likely to create incentives that may adversely affect the use of international supply chains by U.S. companies to the detriment of U.S. consumers. Specifically, it may lead to inefficiently-organized supply chains which do not capture benefits from locating near key foreign suppliers. It may encourage some foreign countries to permit cartel formation to expand business. These incentives may raise the expected costs of sourcing components and manufacturing finished goods abroad for sale in the United States. Companies could, as a result of the Seventh Circuit's ruling, decide to reorganize their supply chains in a less efficient manner, leaving U.S. consumers worse off.

As a matter of economics, Motorola's allegations imply that defendants' conduct toward Motorola involved import trade and commerce. These allegations and the economic conclusions which follow provide a possible way the Court could permit Motorola's claims under the relevant statutes. Such a finding would enhance deterrence of international cartels and not disrupt the efficient use of international supply chains.

**ARGUMENT**

- I. Where International Markets Include The United States, There Has Typically Been Insufficient Deterrence Against Price-Fixing Conspiracies Harming U.S. Commerce**
  - A. When Firms Act Collusively To Set Prices In International Markets That Include The United States And Include Multinational Buyers Who Operate In The United States and Abroad, The Harm To Such Multinational Buyers Is Inextricably Intertwined With Harm To U.S. Commerce**

A geographic market constitutes the set of regions in which the flow of product is sufficiently responsive to regional differences in price to keep those differences in price small.<sup>8</sup> For example, if the price in region *A* for a particular product were sufficiently high, buyers in that region would have an incentive to purchase the product from another region, say region *B*, and transport it to their

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<sup>8</sup> See, *e.g.*, U.S. Department of Justice and the Federal Trade Commission, *Horizontal Merger Guidelines*, August 19, 2010, § 4.2.2 (Geographic Markets Based on the Locations of Customers).

location. They would do this if the cost savings from buying in region *B* were sufficient to offset the costs incurred in transporting the product to region *A* (plus any additional costs they may have to pay, such as tariffs). Also, an intermediary would find an opportunity to purchase the product in the lower-priced region and resell it in the higher-priced region.<sup>9</sup>

The mobility of products has important consequences for price-fixing cartels. If a cartel sets out to raise prices substantially in only one portion of a geographic market, market forces would reallocate products from the unaffected portion to the affected portion and thus undercut the effectiveness of any attempted price increases. In other words, a higher price in region *A* could not be sustained unless prices in region *B* were high enough to make it unprofitable for buyers in region

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<sup>9</sup> Abstracting from transportation and other transaction costs, the underlying economic concept is known as the “Law of One Price”; see *e.g.*, Walter Nicholson, *Microeconomic Theory*, Thomson-Southwestern, (2005, 9th ed.) at 335–336. See also James Martin, “Revisiting *Empagran* – a Proposed Solution to Insufficient Compensation for Victims and Deterrence of International Cartels” (“Martin”); and Alvin Klevorick and Alan Sykes, “United States Courts and the Optimal Deterrence of International Cartels: a Welfarist Perspective on *Empagran*,” in Eleanor Fox and Daniel Crane (eds.), *Antitrust Stories*, Foundation Press (2007).

A (or for other intermediaries) to engage in arbitrage.

This has important consequences for the organization of global cartels. When products can move freely between regions and countries, any attempt by a global cartel to raise prices only outside the United States, without affecting prices charged in the United States, will be unsuccessful. Profitable reallocation opportunities will lead product to flow from the United States to other regions. If prices outside the United States remain at pre-cartel levels, the cartel will be ineffective at increasing its profits. Consequently, in such a market, a price-fixing cartel has a strong incentive to target both U.S. and non-U.S. prices.

This appears to be the case for the LCDs cartel. The geographic market for small and medium-sized LCD panels appears to be worldwide: in statements to the EC, LCD panel manufacturers have claimed that the geographic market for such panels is worldwide, and in decisions, the EC has determined that the geographic market for such panels is worldwide.<sup>10</sup> Allegedly, the LCDs cartel

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<sup>10</sup> EC cases COMP/M.5414 – Samsung SDI / Samsung Electronics / SMD (January 23, 2009) ¶¶ 25–27; COMP/M.5589 – Sony/Seiko Epson (September 22, 2009) ¶¶ 23–25; COMP/M.5762 – Innolux / Chi Mei / TPO (February 25, 2010) ¶ 21; and COMP/M.6603 – Hon Hai / Sharp / Sharp Display Products (June 22, 2012) ¶ 22.



targeted prices both inside and outside the United States when it targeted sales to Motorola, which negotiated a single global price.<sup>11</sup>

**B. An International Cartel That Is Caught And Punished Nonetheless Appears Likely To Gain Substantially From Its Price-Fixing Activity**

U.S. policy seeks to deter cartel formation by ensuring that the likelihood of detection is sufficiently high, and the consequences sufficiently severe, to outweigh the supranormal profits potentially earned from price fixing. To deter cartel formation, U.S. policy uses a combination of criminal penalties—fines and imprisonment—and civil penalties—damages and injunctive relief in civil actions brought by private plaintiffs.<sup>12</sup>

The math behind deterring cartel formation can be seen by considering the incentives for a set

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<sup>11</sup> Petition for a Writ of Certiorari, *Motorola Mobility LLC v. AU Optronics Corp.*, No. 14-1122 (S.C.) (Mar. 16, 2015) at 23–24.

<sup>12</sup> Werden, Hammond, and Barnett at 208. The DOJ can also seek injunctive relief. See, e.g., Robert Lande and Joshua Davis, “Comparative Deterrence from Private Enforcement and Criminal Enforcement of the U.S. Antitrust Laws,” *Brigham Young University Law Review* (2011): 315–390 at 319 and 338 n. 82.

of firms to form a conspiracy. Suppose the conspiracy would generate benefits  $B$ , would be caught with probability  $P$ , and, if caught, would pay penalties  $C$ . It will be rational for this set of firms to conspire if the benefits exceed the expected costs, i.e., if  $B$  is greater than  $P$  times  $C$ .<sup>13</sup> Cartels will be deterred from forming if the probability of catching the cartel,  $P$ , and the penalties if caught,

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<sup>13</sup> See, e.g., Lynne Pepall, Dan Richards, and George Norman, *Contemporary Industrial Organization: A Quantitative Approach*, John Wiley & Sons (2011, 1st ed.) at 236; Dennis Carlton and Jeffrey Perloff, *Modern Industrial Organization*, Addison Wesley (2005, 4th ed.) at 131 and 131 n. 9; and Organisation for Economic Co-operation and Development (“OECD”), *Fighting Hard Core Cartels: Harm, Effective Sanctions and Leniency Programmes* (2003) at 85.

C, are large enough to outweigh the prospective benefits, B.<sup>14</sup>

Civil settlements and penalties play a key role in establishing an adequate level of U.S. deterrence of international cartels. In a study of 260 international cartels discovered between 1990 and mid-2005, Connor found that U.S. civil settlements and penalties based on treble damages are often considerably larger than U.S. government fines: the median U.S. DOJ fine was 43.8% of overcharges in the United States, while the median

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<sup>14</sup> International Competition Network, “Defining Hard Core Cartel Conduct, Effective Institutions, Effective Penalties,” *Building Blocks for Effective Anti-Cartel Regimes*, 1 (2005) (“ICN *Building Blocks*”) at 1. We focus on effective financial penalties for corporations because effective financial penalties are sufficient to deter cartels. However, even profitable cartels can be deterred if they are sufficiently unstable. See Joseph Harrington, “Penalties and the Deterrence of Unlawful Collusion,” *Economics Letters* 124 (2014): 33–36. Government leniency programs, the threat of incarceration, and debarment from future employment can destabilize cartels by creating conflicting incentives for individual cartel members and punishments targeted at culpable individuals. Werden, Hammond, and Barnett at 225, 233, and 234; and Douglas Ginsburg and Joshua Wright, “Antitrust Sanctions,” *Competition Policy International* 6 (2010): 3–39 (“Ginsburg and Wright”) at 19–22.

civil recovery was 105.9% of overcharges in the United States.<sup>15</sup>

In fact, government fines for international cartels do not typically exceed overcharges on sales in that jurisdiction within *any* jurisdiction: for example, the median European Commission fine equaled only 31.7% of overcharges.<sup>16</sup> This leaves a significant role for private enforcement in the effective financial deterrence of international cartels. Although there has been some implementation of single-damages suits in the EU in the past five years, Connor reports that “Canada and the United States are virtually alone in the world in having legal systems that encourage private antitrust suits...similar suits are negligible or unknown in the rest of the world.”<sup>17</sup> For example, last year saw the first trial in the United

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<sup>15</sup> John Connor, “Effectiveness of Antitrust Sanctions on Modern International Cartels,” *Journal of Industry, Competition and Trade* 6 (2006) at 212. Limiting the sample to cartels whose price fixing spanned at least two continents leads to the same conclusion: civil recoveries exceed U.S. DOJ fines. For such global cartels, Connor’s numbers are the same (43.8%) for the median U.S. DOJ fine and larger (124.2%) for the median civil recovery in the United States. *Id.* at 212.

<sup>16</sup> *Id.* at 212.

<sup>17</sup> *Id.* at 209, n. 37.

Kingdom by a private plaintiff seeking damages.<sup>18</sup> So “other nations’ private action remedies are exceedingly weak, and global cartels’ profits from sales outside of America may overwhelm losses from damages on sales within.”<sup>19</sup>

As a consequence, detected global cartels often appear to be profitable even after being discovered and paying sanctions.<sup>20</sup> Connor reports a median ratio of total global sanctions to overcharges as 42.3% for detected global cartels.<sup>21</sup> Connor estimates that more than 80% of detected global cartels financially benefitted from their illegal activity even after paying government and civil sanctions.<sup>22</sup> The median detected global cartel apparently kept more than half of the overcharges it extracted from customers.<sup>23</sup> Among global cartels, median total sanctions accounted for only

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<sup>18</sup> *PaRR*, “Dow’s UK rubber settlement shows need for ‘pass-on’ clarity — lawyers,” (May 29, 2014).

<sup>19</sup> Eleanor Fox, testimony before the Antitrust Modernization Commission (Feb. 15, 2006) at 11.

<sup>20</sup> Global cartels fixed prices on multiple continents. John Connor, “Effectiveness of Antitrust Sanctions on Modern International Cartels,” *Journal of Industry, Competition and Trade* 6 (2006) at 199.

<sup>21</sup> *Id.* at 212.

<sup>22</sup> *Id.* at Table 6 and 211–212.

<sup>23</sup> *Id.* at 212.

6.2% of total affected sales.<sup>24</sup> Empirical evidence on the excess profits earned by global conspiracies generally estimates that the median overcharge from global conspiracies exceeds this percentage.<sup>25</sup>

As this evidence indicates, global cartels find it profitable to conspire, even after paying government fines and private civil penalties. In the case of the vitamins cartel, for example, worldwide financial gains attributable to conspiracy have been estimated to substantially exceed the total value of government fines and civil recoveries obtained.<sup>26</sup> The same is true of the graphite electrodes cartel.<sup>27</sup>

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<sup>24</sup> *Id.* at 209.

<sup>25</sup> John Connor and Robert Lande, “How High Do Cartels Raise Prices? Implications for Optimal Cartel Fines,” *Tulane Law Review* (2005): 513–570 at 541; OECD, *Hard Core Cartels: Third Report on the Implementation of the 1998 Council Recommendation* (2005) at 25; John Beyer, “Are Global Cartels More Effective Than ‘National’ Cartels?,” (2010); and Margaret Levenstein and Valerie Suslow, “What Determines Cartel Success?,” (2002) at 19.

<sup>26</sup> John Connor, *Global Price Fixing*, Kluwer Academic Publishers, 2nd and revised ed. (2007) (“Connor *GPF*”) at 426–430; and Martin. The OECD estimates that nominal sanctions were close to the cartel gains given the OECD’s assumed overcharge, but evidence suggests the overcharges were greater than the OECD assumed. *Hard Core Cartels: Recent Progress and Challenges Ahead* (2003) at 35 and 51, n. 13; Connor *GPF* at 330–335.

<sup>27</sup> OECD, *Hard Core Cartels: Recent Progress and Challenges Ahead* (2003) at 37 and 51, n. 14.

**C. A Prospective International Cartel Benefits From the Prospect Of Escaping Detection And Punishment**

The foregoing suggests that financial penalties for international cartels are inadequate even if detection is certain (*i.e.*,  $P=1$ ). But “not all cartels are detected and prosecuted,” and the academic literature reports detection rates substantially lower than 100%.<sup>28</sup> Illegal cartels have strong incentives to keep their existence secret.<sup>29</sup> Because not all illegal cartels are caught, the figures cited above understate prospective cartels’ benefits attributable to conspiracy and imply that total sanctions would have to more than double from historical levels before the median

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<sup>28</sup> *Id.* at 25. On detection rates, see, *e.g.*, Peter Bryant and E. Woodrow Eckard, “Price Fixing: The Probability of Getting Caught,” *Review of Economics and Statistics* 73 (1991): 531–536; Nathan Miller, “Strategic Leniency and Cartel Enforcement,” *American Economic Review* 99 (2009): 750–768; Ginsburg and Wright at 7–8; Emmanuel Combe, Constance Monnier, and Renaud Legal, “Cartels: The Probability of Getting Caught in the European Union,” Bruges European Economic Research Paper 12 (2008); and Peter Ormosi, “A Tip of the Iceberg? The Probability of Catching Cartels,” *Journal of Applied Econometrics* 29 (2014): 549–566.

<sup>29</sup> Werden, Hammond, and Barnett at 221; and ICN *Building Blocks* at 1.

conspiracy would be unprofitable. If, say, half of all illegal cartels are eventually caught—an assumed detection rate exceeding the rates reported in academic research—then total sanctions would have to more than quadruple from historical levels before the median conspiracy would be unprofitable. Even if two-thirds of cartels are eventually caught, total sanctions would have to more than triple from historical levels before the median conspiracy would be unprofitable.

**D. The Existence of Many Serial Offenders Indicates That Cartel Behavior Is Inadequately Deterred**

That conspiracy is a financially profitable decision due to the relatively low degree of financial penalties and the relatively high likelihood of escaping detection is illustrated by the fact many companies caught participating in international cartels are serial offenders.<sup>30</sup> These companies repeatedly form and participate in cartels and are apparently undeterred by current enforcement policy. Looking at alleged participants in the LCDs

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<sup>30</sup> On the overlap of companies and even employees involved in the various electronics cartels, see Roger Noll, “The DRAM Antitrust Litigation,” in John Kwoka, Jr. and Lawrence White (eds.), *The Antitrust Revolution*, Oxford University Press (2013, 6th ed.).



cartel, these corporations and their corporate families have been alleged to participate in other cartels (and many have admitted they did): Samsung—DRAM, CRTs, ODDs, battery cells; Hitachi—CRTs, ODDs, auto parts, battery cells; LG—CRTs, ODDs, battery cells; Mitsubishi—graphite electrodes, auto parts, fax paper; Panasonic-Matsushita-Sanyo—ODDs, auto parts, battery cells; Philips—CRTs, ODDs; Toshiba—CRTs, ODDs; and Chunghwa—CRTs.

In summary, current deterrence appears inadequate, current levels of financial sanctions do not render collusion unprofitable, and many firms are serial offenders.<sup>31</sup>

One might ask whether it would be preferable to leave price-fixing claims for purchases by foreign affiliates within foreign courts. The answer from the perspective of economic policy is, at present, no. As described above, private civil suits in foreign courts for price-fixing violations are rare, and current levels of foreign sanctions provide inadequate deterrence of international cartels. Inadequate deterrence persists today in spite of broad international consensus that secret cartel

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<sup>31</sup> See Ginsburg and Wright at 4–5 and 17–18. While Ginsburg and Wright favor policy solutions other than higher corporate sanctions, they too agree on these basic facts.

agreements are “the most egregious violations of competition law” and “the most harmful form of all types of anticompetitive conduct.”<sup>32</sup>

Moreover, the Seventh Circuit’s ruling appears to give technical immunity from private U.S. suits seeking damages to global cartels that insist on only transacting with a foreign subsidiary of a U.S. multinational.<sup>33</sup> Consequently, all global cartels would effectively have the option of becoming immune from the reach of U.S. antitrust laws, even on goods eventually shipped to U.S. consumers, by insisting on a particular corporate form for their counter-parties. From the perspective of economic policy, this would be undesirable.

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<sup>32</sup> OECD, *Hard Core Cartels: Recent Progress and Challenges Ahead* (2003) at 7; and ICN *Building Blocks* at 1, 5. Regarding international cartels, see OECD, *Hard Core Cartels: Third Report on the Implementation of the 1998 Council Recommendation* (2005) at 12. See also Supplemental Brief for the United States as Amicus Curiae, *Motorola Mobility LLC v. AU Optronics Corp.*, No. 14-8003 (7th Cir.) (Jun. 27, 2014) at 6.

<sup>33</sup> *Motorola Mobility LLC v. AU Optronics Corp.*, No. 14-8003 (7th Cir.) (Jan. 12, 2015) at 7–9.

**II. Economic Logic Implies That Plaintiffs In Motorola's Situation Should Be Allowed To Recover Damages So As Not To Create Incentives To Inefficiently Distort International Production And Trade**

**A. International Supply Chains Are Organized To Capture Important Benefits Of Geographic Concentration**

Many goods are produced in geographically concentrated regions. In the United States, for instance, film and television is concentrated in Los Angeles, high-tech R&D is concentrated in Silicon Valley, and financial activity is concentrated on Wall Street. Production of LCD panels and finished goods containing LCD panels is similarly concentrated in Asia.<sup>34</sup>

This concentration can occur for economically beneficial reasons. For instance, external economies of scale can lead production to efficiently concentrate in one region.<sup>35</sup> Knowledge

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<sup>34</sup> EC case COMP/M.5414 – Samsung SDI / Samsung Electronics / SMD (January 23, 2009) ¶ 25.

<sup>35</sup> Paul Krugman, “Increasing Returns and Economic Geography,” *Journal of Political Economy* 99 (1991): 483–499.

spillovers may tend to create incentives to geographically co-locate and capture synergies.<sup>36</sup>

International supply chains are organized in such a manner so as to capture these benefits. For instance, research has shown that foreign countries with lower costs and export-friendly policies export more inputs to U.S. multinational parents via their foreign affiliates.<sup>37</sup>

**B. A Decision That Motorola Has No Claim Under U.S. Antitrust Laws For Purchases By Its Foreign Subsidiaries Is Likely To Distort Incentives To Efficiently Use International Supply Chains And Make U.S. Consumers Worse Off**

By allowing foreign suppliers to collude against foreign subsidiaries of U.S. multinational parents, the Seventh Circuit's ruling is likely to make U.S. consumers worse off. This is because international supply chains and production are likely to be distorted if antitrust decisions based on

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<sup>36</sup> Gregory Tasse, "Competing in Advanced Manufacturing: The Need for Improved Growth Models and Policies," *Journal of Economic Perspectives* 28 (2014): 27–48 at 30.

<sup>37</sup> Gordon Hanson, Raymond Mataloni Jr., and Matthew Slaughter, "Vertical Production Networks in Multinational Firms," *Review of Economics and Statistics* 87 (2005): 664-678.

the organizational forms of corporate families lead certain purchases to be exempt from U.S. antitrust laws while other purchases are protected by U.S. antitrust laws.<sup>38</sup> The potential consequences are as follows.

First, the Seventh Circuit's ruling creates an incentive to inefficiently reorganize a supply chain to change the purchaser to the U.S. multinational parent and the delivery location to the United States for legal reasons. This would result in the loss of benefits from locating near key foreign suppliers.<sup>39</sup> It would also discourage U.S. companies from moving production offshore even when it would otherwise be efficient to do so. It is apparent that changing the purchaser is likely welfare-reducing: if it were better to have the U.S. multinational parent buy the good and take delivery in the United States, the U.S. parent should be the purchaser already.<sup>40</sup> For instance, Motorola was presumably the efficient purchaser

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<sup>38</sup> One of the OECD's objections to cartels is that they distort world trade, creating waste and inefficiency. OECD, *Hard Core Cartels: Recommendation of the Council Concerning Effective Action Against Hard Core Cartels* (1998) at i.

<sup>39</sup> Gregory Tasse, "Competing in Advanced Manufacturing: The Need for Improved Growth Models and Policies," *Journal of Economic Perspectives* 28 (2014): 27–48 at 30.

<sup>40</sup> Only in the special case where a multinational buyer does not care which of its organizations buys the panel would there be no increase in cost from altering the supply chain.

for LCD panels delivered in the United States, but not for LCD panels delivered abroad to Motorola's foreign subsidiaries. In response to a legal rule that did not allow an antitrust claim based on LCD panels delivered abroad, Motorola would be incentivized to switch its purchasing behavior to have it, not its foreign subsidiaries, make future purchases and take delivery in the United States.

Second, the Seventh Circuit's ruling may encourage some foreign countries to permit cartel formation to attract business to that nation by acting as havens for cartels.<sup>41</sup> For instance, by 2007, only half of the world's developing countries had enacted an antitrust law and created an agency to enforce the law.<sup>42</sup> Cartels operating in such countries would be able to exploit any supply chains that had not changed by selling to foreign

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<sup>41</sup> Kathryn McMahon, "Competition Law and Developing Economies: Between 'Informed Divergence' and International Convergence," in Ariel Ezrachi (ed.), *Research Handbook on International Competition Law*, Edward Elgar Publishing (2012) at 231; and Paul Victor, "Export Cartels: An Idea Whose Time Has Passed," *Antitrust Law Journal* 60 (1991): 571–581 at 571.

<sup>42</sup> Dina Waked, "Do Developing Countries Enforce their Antitrust Laws? A Statistical Study of Public Antitrust Enforcement in Developing Countries," (2011) at 3 (77 of 151 developing countries had such laws and agencies in 2007).

subsidiaries unable to pursue an antitrust claim in U.S. courts.<sup>43</sup> This would increase input costs.

In both cases, the result would be increased input/production costs. Increased input/production costs would lead to higher prices of final U.S.

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<sup>43</sup> Also, these cartels could still exploit U.S. multinational parents who changed their supply chains to import the input into the United States before using it. These cartels would find it profitable to sell to non-cartel foreign intermediaries whose sole purpose would be to purchase inputs and resell them to U.S. corporations. Creating an additional layer of transactions could exempt the cartel from the reach of U.S. law under the Seventh Circuit's ruling.

Similarly, the Seventh Circuit's ruling does not consider the possibility that a nation with otherwise good antitrust laws and enforcement may choose to treat transactions by foreign subsidiaries of U.S. firms operating in that nation differently than transactions by local firms and citizens. Suppose that a nation decided to treat local, wholly owned subsidiaries of U.S. firms as foreign for antitrust purposes, leaving it to U.S. antitrust law to protect the subsidiaries. The panel's ruling would then leave both the subsidiary and the parent without legal recourse and consequently would incentivize cartels to target such firms.

consumer goods.<sup>44</sup> Research has shown changes in trade costs have a more than proportional impact on the total cost of production when the good is produced by a sequential, vertical chain stretching across multiple countries.<sup>45</sup> Research has also quantified how an increase in costs in any country is augmented in costs worldwide.<sup>46</sup>

### **III. Given Motorola's Allegations, Defendants' Conduct Toward Motorola Involved Import Trade And Commerce As A Matter of Economics**

In § I.A, we explained how harm to multinational buyers is intertwined with harm to U.S. consumers in a global geographic market (which LCDs appears to be). We now elaborate on

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<sup>44</sup> Higher input/production costs and final consumer good prices result regardless of whether the final consumer goods were manufactured abroad, then imported, or the components imported here, then assembled. They follow immediately as a consequence of the economics of changing production to a less efficient organizational form, encouraging cartel formation in foreign countries, or both.

<sup>45</sup> Kei-Mu Yi, "Can Vertical Specialization Explain the Growth of World Trade?," *Journal of Political Economy* 111 (2003): 52-102.

<sup>46</sup> Jonathan Eaton and Samuel Kortum, "Technology, Geography, and Trade," *Econometrica* 70 (2002): 1741-1779.



the relationship between the alleged conduct toward Motorola and import trade and commerce.

Consider the following allegations by Motorola.<sup>47</sup> First, LCD panels were purchased at the same price regardless of whether Motorola or its foreign subsidiaries bought them.<sup>48</sup> Second, Motorola functioned with its subsidiaries in the mobile phone business as a “single enterprise” that purchased LCD panels (and other components), manufactured mobile phones, and imported those phones into the United States and elsewhere.<sup>49</sup> Third, defendants knew that Motorola did this, and defendants did not distinguish between panels shipped to the United States as panels, panels shipped to the United States in phones, and panels never shipped to the United States.<sup>50</sup>

The economic consequence of these allegations is that the same price-fixing conduct

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<sup>47</sup> We understand that the Court must assume the facts alleged by Motorola are true for purposes of Motorola’s appeal. Consequently, we assume those facts are true as well.

<sup>48</sup> Petition for a Writ of Certiorari, *Motorola Mobility LLC v. AU Optronics Corp.*, No. 14-1122 (S.C.) (Mar. 16, 2015) 23–24.

<sup>49</sup> Appellant’s Opening Brief, *Motorola Mobility LLC v. AU Optronics Corp.*, No. 14-8003 (7th Cir.) (Aug. 29, 2014) at 9.

<sup>50</sup> *Id.* at 50.

elevated the price of LCDs, and elevated the price by the exact same amount, regardless of where the LCDs were initially sent by defendants or finally sent by Motorola. From the perspective of the cartel's objectives, it did not matter whether an LCD panel was sent to the United States and then manufactured into a Motorola phone, manufactured into a Motorola phone in Asia and then sent to the United States, or manufactured into a Motorola phone in Asia and sold outside the United States.

These allegations and the economic conclusions which follow provide a possible way to permit Motorola's claims under the relevant statutes. Specifically, this Court could rule that Motorola's claims are permitted under the FTAIA's import-commerce exclusion, while leaving open the

possibility that claims in other circumstances would not be.<sup>51</sup>

## CONCLUSION

In examining the deterrent effect of U.S. antitrust laws on the formation of international cartels, we find that there is frequently inadequate protection of the welfare of U.S. consumers. The current level of criminal and civil penalties is often not sufficient to deter cartel formation in large international markets, leading to a situation where firms that operate in these markets can cause substantial harm to U.S. consumers. Hence,

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<sup>51</sup> Different findings of fact could warrant a conclusion that at least some of defendants' anticompetitive conduct did not involve import trade or commerce. If the above allegations were not true (or if new pertinent facts have yet to be articulated), it is possible that some of defendants' conduct might not have involved U.S. import trade and commerce. At times, there might not have been a single price. Motorola might have negotiated an LCD price for itself different from prices for its foreign subsidiaries. At times, Motorola might not have acted as a single enterprise. Motorola's foreign subsidiaries might have operated with autonomy over when to buy panels and how to use them. At times, the defendants might have distinguished between panels in meaningful ways. For instance, defendants might have distinguished between a type of low quality LCD panel to Motorola's foreign affiliates for manufacture into a type of low-quality phone that was never imported in the United States, and other panels bought by Motorola.

economic logic dictates that victims such as Motorola should be permitted to seek treble damages in U.S. courts to deter the formation of cartels that harm U.S. consumers and businesses by harming U.S. domestic and import commerce. Economic logic also counsels against adopting a legal rule which would create incentives to distort the efficient use of international supply chains. Finally, Motorola's allegations and the economic conclusions which follow provide a possible way the Court could permit Motorola's claims under the relevant statutes.

Respectfully submitted,

Delmer R. Mitchell  
*Counsel of Record*  
SCHMIEDESKAMP, ROBERTSON,  
NEU & MITCHELL LLP  
525 Jersey St.  
Quincy, IL 62301  
(217) 223-3030  
[dmitchell@srnm.com](mailto:dmitchell@srnm.com)

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