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Economic Tools Can Help Evaluate Cartels Amid Recessions

By **Sachin Sancheti and Arthur Corea-Smith** (July 22, 2020, 4:48 PM EDT)

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U.S. antitrust authorities have communicated that although they will allow firms greater latitude to cooperate in fighting the pandemic, they will continue to aggressively monitor other forms of coordination.

With these warnings, it is fair to question whether cartel behavior is more likely to occur during an economic downturn. While the economic literature remains divided on the question of cyclicality of cartel formation, it has continued to forge new tools for detecting cartels and examining their effects.

Cartels are not expected to receive a free pass during a pandemic — or a downturn.

The COVID-19 pandemic is already causing widespread job losses and speculation of a protracted recovery.[1] In the face of the ongoing health crisis, governments have promised to facilitate and expedite cooperation between companies looking to confront COVID-19.[2]

The U.S. Department of Justice and Federal Trade Commission acted on this commitment by allowing cooperation between medical suppliers and distributers.[3] Despite the guidance, observers have cautioned that this policy does not grant blanket immunity from antitrust action during the pandemic, and companies must be prepared to articulate how their collaboration improves consumer welfare.[4]

Indeed, both federal and state governments have made it clear they are on alert for anti-competitive behavior. The DOJ and FTC are closely monitoring coordination on wages.[5] State governments have been on the lookout for price gouging for personal protective equipment and other essential supplies.[6]

Similarly, while allowing for certain coordination such as temporarily combining production and distribution services to fight the pandemic, the federal government and antitrust authorities have been clear that they are not opening the door to other forms of coordination.[7] In particular, antitrust authorities around the world have been clear that any form of coordination on prices remains strictly off limits.[8]

During the Great Recession, U.S. antitrust authorities expressed concern that economic instability might increase the incentives to form cartels and that the infusion of federal funds into distressed industries might facilitate such collusion.[9] Warnings from the DOJ and FTC that any coordination must be narrowly tailored to the crisis have commentators speculating that there could be an increase in enforcement against price fixing and related schemes during this downturn.[10]

Are cartels and economic downturns linked?

Economic theory considers the following basic incentives in the formation of cartels: First, firms must have an incentive to coordinate rather than accept a competitive outcome. For example, firms must earn higher profits by collectively charging higher than competitive prices. Second, to sustain such an arrangement, they must have a disincentive to deviate from the coordination, or face punishment for failing to hold up their end of the bargain.

For example, if other firms are charging a higher than competitive price, an individual firm could gain market share by undercutting them and charging a lower price. However, if other firms punish this action by returning to competitive prices, or engaging in a price war, the gains from both the deviation and coordination will be lost thereafter. For coordination to be sustainable, the threat of punishment must be credible and must be severe enough to dissuade any of the firms from deviating.

How are the economic incentives in cartel formation affected by economic downturns? Economic theory offers two different perspectives.

One school of thought, beginning with Julio Rotemberg and Garth Saloner, posits that price wars are more likely in periods of high demand. According to this view, for an individual firm, the reward for defecting from the cartel by lowering its price in periods of high demand — in the form of higher market share resulting in higher profits — more often outweighs the loss due to punishment for defecting — in the form of lower profits — which would be meted out in the future when demand is likely to be lower.[11]

Rotemberg and Saloner find support for this view in the cement industry — in which output is procyclical while prices are countercyclical — arguing that this evidence is consistent with cartels performing more effectively in recessions.[12]

Makoto Hanazono and Huanxing Yang offer an alternative theory arriving at a similar conclusion — price wars are more likely in periods of high demand because the cartel can punish defecting members more severely by returning to competitive prices when the demand is high.[13] This implies that cartel activity is more likely in a recession than in periods when the economy is booming.

A contrasting view put forward by Edward Green and Robert Porter posits that firms have limited information about their competitors' activities and as a result, they will continue to engage in coordination as long as prices are high. However, when prices fall below a certain level, they interpret it as a signal that their rivals are no longer cooperating. Prices may also fall due to a slowdown in economic activity, but because firms cannot observe their competitors' activities, a fall in prices may trigger a price war.[14] In other words, sustaining a cartel becomes more difficult in a recession.

Another theory suggesting the fragility of cartels in downturns is that of John Haltiwanger and Joseph Harrington, which suggests that during a recession, firms expect future profits to be lower, meaning that the punishment from a return to competitive pricing is less severe. This weakens the cartel's ability to

enforce cooperation among its members.[15]

Yet another theory put forth by Mukesh Eswaran claims that firms facing potential bankruptcy may need to undercut the cartel simply to prevent insolvency. Punishments meted out in future periods in which the firm may not exist are, not surprisingly, less of an incentive to remain in the cartel. This may make recessions even more ripe for unraveling cartels.[16]

The empirical economics literature is scant on evidence that cartels are strongly impacted by the business cycle, in either direction. Margaret Levenstein and Valerie Suslow report that across several studies examining different periods in the U.S., there is little evidence that cartel formation is more likely in either a recession or a boom.[17]

Unlike business cycle movements that are easier for cartels to observe and adjust to, some evidence suggests that industry-specific idiosyncratic and unforeseen demand shocks have a stronger bearing on cartel stability.[18] Therefore, it is likely that the cartel stability would vary across industries. As the effects of the pandemic have been felt asymmetrically across industries, it remains to be seen if the nontraditional nature of this recession will impact cartel formation.[19]

The economic toolkit for examining the impact of cartel activity remains relevant.

Regardless of whether the current crisis makes cartels more likely, the economic toolkit for examining the formation and detection of alleged cartels remains relevant. The empirical economics literature provides a variety of examples of how economic tools have been used in this context.

For example, practitioners may be interested in understanding whether collusion can be detected in cases in which only some of the firms in the market participate, or cases in which collusion only occurs in a particular segment of the market.

David Imhof, Yavuz Karagök and Samuel Rutz provide a series of tests to detect bid rigging in procurement auctions even when collusion does not occur in every bid. They accomplish this by applying a series of screens on the bidding data, allowing them to identify a subset of suspicious contracts and firms. Swiss competition authorities used these methods to conduct investigations of anti-competitive behavior.[20]

The U.K.'s Competition and Markets Authority has developed an online price monitoring tool in a similar spirit to look for evidence of firms engaged in resale price maintenance, which could lead to collusive outcomes.[21]

Similarly, practitioners may be interested in documenting whether collusive effects can be observed after an approved merger or joint venture. Nathan Miller and Matthew Weinberg provide a framework for this, examining the beer market following antitrust approval of the MillerCoors LLC joint venture. Relying on a model of demand for differentiated products, they conduct counterfactual simulations to test whether prices following the joint venture were consistent with a collusive outcome.[22]

Yet another question is how cartels might form, and in particular, whether they might be able to form without the sort of direct communications that are per se illegal. David Byrne and Nicolas de Roos show how dominant firms might coordinate prices without direct communication in a detailed analysis of the gasoline industry. They find price leaders in that industry communicated via signals such as telegraphing their Thursday price jumps via price increases at a handful of stations on Wednesdays.

This analysis provides a potential road map for practitioners interested in leveraging detailed industry data to detect and evaluate the effects of cartels formed through indirect communication between firms.[23]

After a collusive scheme or bidding ring is discovered, practitioners may also be interested in understanding the economic harm caused by such activities to determine damages. John Asker combines data on a known bidding ring with a detailed institutional knowledge of its operation to empirically assess both the economic inefficiencies caused by the collusive behavior and the damages the ring may have inflicted on bidders not party to the cartel.

By knowing institutional details of the collusive conduct, economists can precisely estimate any resulting economic harm.[24]

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[1] See, e.g., "The Employment Situation – June 2020," Bureau of Labor Statistics, July 2, 2020. See also Dunsmuir, L., "Green Shoots Welcome but Recovery Still a Long Road, Fed's Powell Says," Reuters, June 16, 2020, https://www.reuters.com/article/us-usa-fed-powell/feds-powell-set-to-reiterate-long-u-s-economic-recovery-call-for-more-fiscal-support-idUSKBN23N1HV.

[2] See, e.g., Koenig, B., "DOJ, FTC Speeding Up Antitrust Prechecks for Coronavirus," Law360, March 24, 2020, https://www.law360.com/articles/1256520. See also Dreid, N., "EU Won't Bring Cartel Charges Over COVID-19 Cooperation," Law360, March 23, 2020, https://www.law360.com/articles/1255995; Pearlman, M., "UK Watchdog Won't Go After Most COVID-19 Coordination," Law360, March 25, 2020, https://www.law360.com/articles/1256974.

[3] "Department of Justice Issues Business Review Letter to Medical Supplies Distributors Supporting Project Airbridge under Expedited Procedure for COVID-19 Pandemic Response," Department of Justice and Federal Trade Commission, April 4, 2020, https://www.justice.gov/opa/pr/department-justice-issues-business-review-letter-medical-supplies-distributors-supporting.

[4] Gilbert, L., "Panel Summary: Antitrust Counseling on Competitor Collaborations and Price Gouging During COVID-19," The Price Point, ABA Section of Antitrust Law, April 2020.

[5] "Justice Department and Federal Trade Commission Jointly Issue Statement on COVID-19 and Competition in U.S. Labor Markets," Department of Justice and Federal Trade Commission, April 13, 2020, https://www.justice.gov/opa/pr/justice-department-and-federal-trade-commission-jointly-issue-statement-covid-19-and.

[6] Dubrow, J., and N. Greene, "Price Gouging in the Crosshairs during COVID-19," National Law Review, April 24, 2020, https://www.natlawreview.com/article/price-gouging-crosshairs-during-covid-19.

[7] Graham, V., "Corporate Coronavirus Cooperation Raises Prospect of Collusion," Bloomberg Law, March 26, 2020, https://news.bloomberglaw.com/mergers-and-antitrust/corporate-coronavirus-cooperation-raises-prospect-of-collusion.

[8] See, e.g., "Joint Antitrust Statement Regarding Covid-19," March 2020, Department of Justice and Federal Trade Commission, https://www.justice.gov/atr/joint-antitrust-statement-regarding-covid-19; "Antitrust: Joint Statement by the European Competition Network (ECN) on Application of Competition Law during the Corona Crisis," European Competition Network, https://ec.europa.eu/competition/ecn/202003_joint-statement_ecn_corona-crisis.pdf; "CMA Approach to Business Cooperation in Response to COVID-19," U.K. Competition and Markets Authority, March 25, 2020, https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/875468/COVID-19_guidance_-.pdf.

[9] See, e.g., Varney, C., "Vigorous Antitrust Enforcement in this Challenging Era," Remarks Prepared for the United States Chamber of Commerce, May 12, 2009, https://www.justice.gov/atr/speech/vigorous-antitrust-enforcement-challenging-era.

[10] Hicks, J., D. Hamilton, and M. Tilley, "Antitrust & Competition Law in the Age of a Global Pandemic," National Law Review, March 27, 2020, https://www.natlawreview.com/article/antitrust-competition-law-age-global-pandemic.

[11] Rotemberg, J., and G. Saloner (1986), "A Supergame-Theoretic Model of Price Wars during Booms," American Economic Review, 76(3), pp. 390–407 at 390–391.

[12] Rotemberg and Saloner posit that their theory applies to both price and quantity competition. Rotemberg, J., and G. Saloner (1986), "A Supergame-Theoretic Model of Price Wars during Booms," American Economic Review, 76(3), pp. 390–407 at 393–398.

[13] Hanazono, M., and H. Yang (2007), "Collusion, Fluctuating Demand, and Price Rigidity," International Economic Review, 48(2), pp. 483–515 at 484–485.

[14] Green, E., and R. Porter (1984), "Noncooperative Collusion under Imperfect Price Information," Econometrica, 52(1), pp. 87–100 at 89.

[15] Haltiwanger, J., and J. Harrington Jr. (1991), "The Impact of Cyclical Demand Movements on Collusive Behavior," RAND Journal of Economics, 22(1), pp. 89–106 at 89. Optimal collusive prices are procyclical if demand is positively correlated. See Bagwell, K., and R. Staiger (1997), "Collusion over the Business Cycle," RAND Journal of Economics, 28(1), pp. 82–106 at 82.

[16] Eswaran, M. (1997), "Cartel Unity over the Business Cycle," Canadian Journal of Economics, 30(3), pp. 644–672 at 646.

[17] Across four studies covering different time periods, the share of cartels that are formed during recession periods corresponded roughly to the share of recession periods in the sample. Cartel breakup also does not appear to be cyclical. While there is some evidence of cartel expansion during the Great Depression, temporary suspension of antitrust enforcement during the National Recovery Act rather than the recession itself may have been the impetus. See Levenstein, M., and V. Suslow (2014), "Cartels and Collusion: Empirical Evidence," in The Oxford Handbook of International Antitrust Economics, 2,

edited by R. Blair and D. Sokol, pp. 1–26 at 5–6, 14.

[18] There is some evidence from the literature that industry volatility makes cartel formation and continuation more difficult, but not specifically due to observable macroeconomic events. Similarly, there is some evidence that price drops may lead to cartel formation, but this seems more due to idiosyncratic events rather than due to poor macroeconomic conditions. See, e.g., Levenstein, M., and V. Suslow (2006), "What Determines Cartel Success?," Journal of Economic Literature, 44(1), pp. 43–95 at 64–67, 86. See also Levenstein, M., and V. Suslow (2014), "Cartels and Collusion: Empirical Evidence," in The Oxford Handbook of International Antitrust Economics, 2, edited by R. Blair and D. Sokol, pp. 1–26 at 7.

[19] For example, the unemployment rate in the leisure and hospitality industry was more than double the national average. See "The Employment Situation – April 2020," Bureau of Labor Statistics, May 8, 2020.

[20] Imhof, D., Y. Karagök, and S. Rutz (2018), "Screening for Bid Rigging – Does it Work?," Journal of Competition Law & Economics, 14(2), pp. 235–261. Using data on bids and rebids in auctions for government construction projects in Japan, Kawai and Nakabayashi (2018) similarly identify firms whose bidding practice is not consistent with competitive behavior, identifying as many as 40 percent of all construction projects won by firms exhibiting this behavior. See Kawai, K., and N. Nakabayashi, "Detecting Large-Scale Collusion in Procurement Auctions," Working Paper.

[21] Nichols, S., "Restricting Resale Prices: How We're Using Data to Protect Customers," Competition and Markets Authority, June 29, 2020, https://competitionandmarkets.blog.gov.uk/2020/06/29/restricting-resale-prices-how-were-using-data-to-protect-customers/.

[22] Miller, N., and M. Weinberg (2017), "Understanding the Price Effects of the MillerCoors Joint Venture," Econometrica, 85(6), pp. 1763–1791.

[23] Byrne, D., and N. de Roos (2019), "Learning to Coordinate: A Study in Retail Gasoline," American Economic Review, 109(2), pp. 591–619.

[24] Asker, J. (2010), "A Study of the Internal Organization of a Bidding Cartel," American Economic Review, 100(3), pp. 724–762.