What Economics Can Tell Us About COVID-19 Era Price-Fixing

By **Alok Khare and George Derpanopoulos** (June 10, 2020)

Social distancing and shelter-in-place orders following the declaration of COVID-19 as a pandemic have caused cataclysmic shifts in demand and supply for most goods and services. Such extreme market shifts expose companies to the risk of violating price-gouging and price-fixing laws.

For example, following a sudden spike in demand for a good over available supply (i.e., excess demand),[1] a seller may be tempted to increase the price for that good. Similarly, producers may be tempted to collaborate to increase prices for goods experiencing excess demand.

The former conduct, a unilateral price hike by a seller, is referred to as price-gouging. The latter conduct, which involves multilateral coordination among producers to hike or maintain prices at a certain level, is referred to as price-fixing.[2] The excess of actual prices over their competitive levels is referred to as an overcharge.

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In this article, we focus on challenges created by current unprecedented market conditions in evaluating the economic evidence for alleged price-fixing and assessing purported overcharges.

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Agreements to manipulate market prices are illegal per se, and the U.S. Department of Justice can criminally prosecute parties entering into such agreements under Section I of the Sherman Act. Moreover, in the wake of the COVID-19 outbreak, the DOJ announced that it intends to actively enforce antitrust law in the "manufacturing, distribution, or sale of public health products such as face masks, respirators, and diagnostics," drawing particular attention to price-fixing.[3]

The Impact of the COVID-19 Crisis on Demand and Supply and Price-Fixing Implications

Under normal market conditions, it is challenging to collude and maintain higher prices. Absent monopoly power, a price increase by the allegedly colluding firms will cause consumers to switch to similar lower-priced products. Further, new producers could enter the market and increase supply, which in turn would reduce the price.

Catastrophic events like COVID-19 can create both demand and supply shocks in certain markets. Basic economics informs us that, all else equal, the shocks will affect equilibrium prices in those markets. For example, a positive demand shock caused by an elevated public health risk will, all else equal, increase the market price of face masks. Similarly, a negative supply shock caused by a disruption in supply chains or hoarding will also, all else equal, increase the market price of face masks.

The public health crisis can cause some manufacturers to halt production for some products temporarily and make it difficult for new firms to enter the market for those products. Under these conditions, the firms remaining in the market can be alleged to have temporary monopoly power, and observed price increases can be alleged to be due to price-fixing, a result of an abuse of the purported market power.

A Price-Fixing Hypothetical During a Pandemic

Consider, for example, a hypothetical market for medical gowns before and after the start of a public health crisis (see Figure 1 for demand and supply changes due to the crisis). We assume that, before the crisis, the market is competitive with a price of $40 per gown, or P1.

We further assume that the crisis results in (1) demand increase and (2) supply restriction. The supply restriction could be due to alleged collusion or a supply chain disruption or both, with the relative proportion of each factor being unknown.[4] As a result, the new market price, or P2, is $60 per gown.[5]

Note that the equilibrium price has increased by $20 — from $40 to $60. To estimate the purported overcharge, one needs to identify the portion of the $20 increase attributable to the alleged conspiracy versus other factors; i.e., supply restriction due to legitimate business reasons, positive demand shock, etc.

Figure 1: Demand and Supply Changes in a Hypothetical Market for Medical Gowns
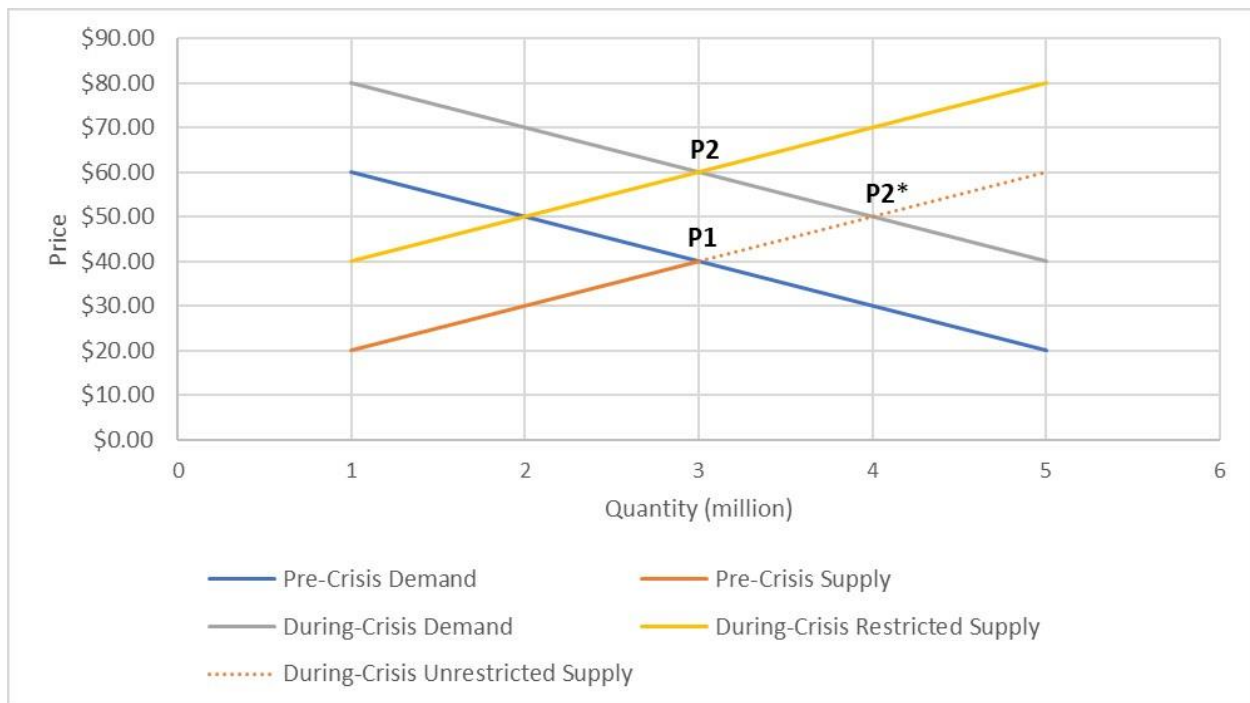
Methods and Challenges in Analyzing Price-Fixing

Let us start with the assumption that the entire supply restriction is due to the alleged conspiracy. Even under this potentially counterfactual assumption, it would be incorrect to conclude that the overcharge per gown equals $20 because that conclusion ignores, among other things, the fact that, even without the alleged collusion, the positive demand shock would have caused a price increase.

A proper analysis would require an estimate of the equilibrium price that would have prevailed absent the alleged conspiracy, or P2*, i.e., $50 in Figure 1.

Note that an overcharge calculation relative to $50, whose estimation is complex, could still overestimate the purported harm, as that analysis would ignore any price increase due to supply chain disruption from legitimate business reasons.

Economists use several methods to overcome challenges in assessing purported overcharges.[6] We discuss the reduced-form estimation of price, a method commonly used in recent price-fixing litigation.[7] The equation is often estimated using a panel dataset — a dataset of market prices for various suppliers across time — that covers both a benchmark period (i.e., when there was no conspiracy) and the conduct period (i.e., the period when the alleged conspiracy occurred).

The actual specification of the reduced-form equation depends on the facts and circumstances of a matter. Besides the modeling issues commonly addressed by experts,[8] there are other potential issues related to current extraordinary market conditions that an expert may need to consider, depending on the product and market at issue, when estimating a reduced form price equation. Some of these issues are:

- Significant geographic variation in both demand and supply factors;
- Change in the relationship between demand and supply factors and the market price;
- Temporary or permanent absence of some suppliers; and
- Technical estimation challenges due to reduced data availability.

In short, the COVID-19 crisis has further complicated an already complex economic analysis. It might be challenging to account for all these issues through a reduced-form analysis, and one would likely need to supplement the reduced-form analysis with other analyses (e.g., separate modeling of quantity supplied by allegedly colluding firms).

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[1] This can happen for multiple reasons: legitimate business reasons such as supply chain and manufacturing disruptions, hoarding by some sellers, etc.

[2] Such allegations are often made by both the direct and indirect purchasers of products at issue through class actions. Following the onset of COVID-19, new class actions alleging price-fixing have been filed.

[3] https://www.justice.gov/opa/pr/justice-department-cautions-business-community-against-violating-antitrust-laws-manufacturing (last accessed 3/20/2020). The DOJ also recently formed a Procurement Collusion Strike Force ("PCSF"), an interagency partnership that focuses on antitrust crimes in government procurement, grant, and program funding.

The DOJ indicated that the PCSF would be on high alert for collusive practices in the sale of critical products to federal, state, and local agencies (https://www.law360.com/articles/1254800/tracking-the-doj-s-threefold-response-to-covid-19, last accessed 3/20/2020). Furthermore, lawmakers also urged the Federal Trade Commission ("FTC") to protect consumers from "misconduct [that] places critical goods out of reach for those who need them most" (https://www.law360.com/articles/1254322/dems-urge-ftc-action-on-covid-19-price-gougingy, last accessed 3/20/2020).

[4] This assumption allows for the possibility that one of the two sources of supply restriction — but not both — is absent; i.e., that there is no collusion or no supply chain restriction.

[5] In this article, we focus only on the price changes.

[6] The choice of method to analyze overcharges in a matter will guided by the facts and circumstances of the products at issue and the prevalent market conditions in that matter.

[7] Reduced-form estimation involves estimating a statistical equation that models market prices as a function of demand and supply factors and other variables describing market structure (e.g., market concentration). The model also contains an indicator variable that attempts to measure an average overcharge (i.e., average price increase above competitive levels across time and products analyzed).

[8] Some of these are: a) choice of demand and supply factors and indicator variables; b) definition of the clean and the conduct period; c) modeling data trends, etc.