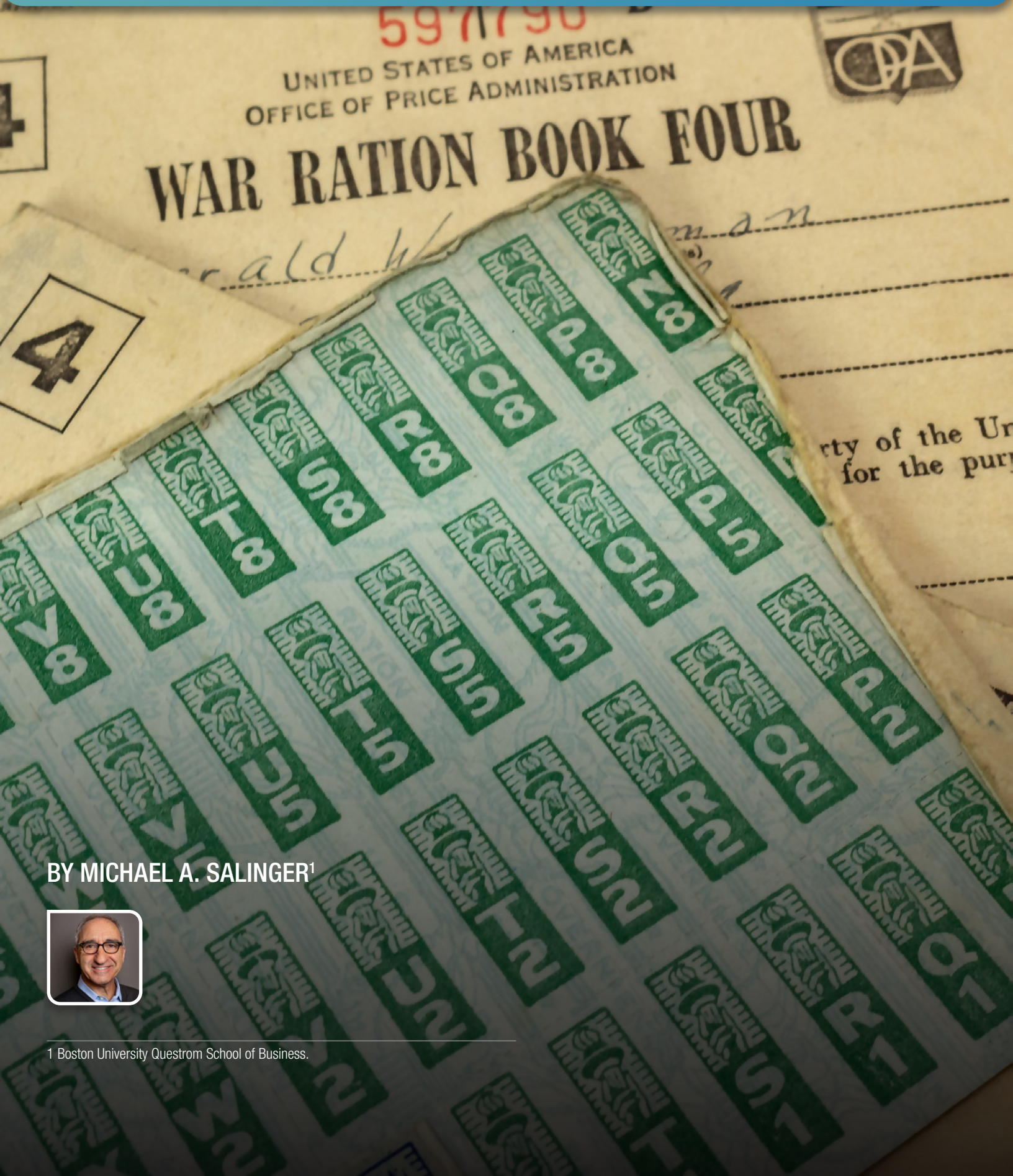
PRICE GOUGING AND THE COVID-19 CRISIS – THIS TIME IS (A LITTLE) DIFFERENT



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I. INTRODUCTION – CONTRASTING VIEWS OF ECONOMISTS AND THE PUBLIC

The conventional definition of economics is the study of the allocation of scarce resources among alternative uses; and both economic research and teaching focus heavily on the role of a decentralized price mechanism in accomplishing this task. In his 1979 Presidential Address to the American Economic Association, Robert Solow observed, "*Ever since Adam Smith, economists have been distinguished from lesser mortals by their understanding of and - I think one has to say - their admiration for the efficiency, anonymity, and subtlety of decentralized competitive markets as an instrument for the allocation of resources and the imputation of incomes.*"[2] His observation that "lesser mortals" – i.e. non-economists – do not accept the arguments economists make about the desirability of market outcomes is surely correct. As evidence, Kahneman, Knetsch & Thaler[3] reported the results of a telephone survey in which 82 percent of respondents said that they considered it unfair for a local hardware store to raise the price of snow shovels from its normal price of $15 to $20 during a snow storm.

During the COVID-19 crisis, shortages have arisen as have issues of price gouging. The crisis created a surge in the need for personal protective equipment ("PPE") and ventilators that hospitals needed to treat patients infected with the COVID-19 virus. When President Trump surmised that the drug hydroxychloroquine might be an effective treatment that, in any event, was safe regardless of whether it was effective, shortages of the drug arose.[4] And, after consumers stocked up on extra supplies of toilet paper and paper towels, those items became temporarily unavailable in many stores.[5]

Legal prohibitions against price gouging make it illegal to let the market work. Price gouging laws make the news whenever there is a natural disaster. An example was when hurricanes Katrina and Rita hit the U.S. Gulf Coast in fall of 2005, knocking out a substantial portion of petroleum production and refining capacity in the Gulf Coast as well as pipelines for transporting petroleum and refined petroleum products to particular regions, most notably the mid-Atlantic states. Because of the political pressure stemming from the increase in gasoline prices caused by the hurricanes, Congress mandated that the Federal Trade Commission

2 Solow, Robert, M. "On Theories of Unemployment," *American Economic Review*, vol. 70 (1980), pp. 1-11.

3 Kahneman, Daniel, Knetsch, Jack, and Thaler, Richard, "Fairness as a Constraint on Profit Seeking: Entitlements in the Market," *The American Economic Review* vol. 76 (1986), pp. 728-41.

4 O'Connor, Anahad, "Coronavirus Continues to Disrupt Prescription Drug Supplies," The New York Times, May 28, 2020 available at https://www.nytimes.com/2020/05/28/well/live/coronavirus-lupus-arthritis-prescription-drugs.html.

5 Corkery, Michael & Maheshwari, Sapna, "Is There Really a Toilet Paper Shortage?," The New York Times, March 13, 2020 available at https://www.nytimes.com/2020/03/13/business/toilet-paper-shortage.html.

("FTC") study the behavior of petroleum markets in the wake of the crisis. The FTC concluded that the price increases that arose reflected the normal and efficient workings of competitive markets in response to shortages.[6]

The COVID-19 episode provides further evidence to evaluate the arguments for and against price gouging legislation and, more generally, for the efficiency of market mechanisms in solving the basic economic problem of allocating scarce resources. In this note, I will argue that, in general, the response of markets to the COVID-19 crisis is another example of the efficiency of markets in solving the basic economic problem of how to allocate scarce resources. By standing in the way of the proper functioning of markets, legal prohibitions against price gouging serve no useful purpose and can do considerable harm. However, I also argue for one exception to the general rule for the efficiency of the market outcome. Some centralized national system for procuring and distributing PPE and ventilators would have been better than simply letting the market operate.

II. THE ECONOMICS AND BUSINESS OF PRICE "GOUGING"

A. The Argument for Letting the Market Work

After hurricane Wilma, which hit Miami about a month after hurricane Rita (and two months after Katrina), a Miami man drove his flatbed truck to North Carolina – several hundred miles away – and purchased a set of portable generators, paying roughly $300 for some and $500 for others. He drove the truck back to Miami and sold the generators for approximately double what he had paid for them. The Florida Attorney General sued him for price gouging.[7]

The initiative shown by this truck owner helped alleviate the shortage of generators, since more Floridians were able to acquire generators than if the truck owner had not driven to North Carolina. We do not need to give him an award for his initiative. The market did that, or at least would have if he had not had to pay a fine to the state. It would be interesting to know what that truck owner did the next time a hurricane hit Miami. Perhaps he was civic-minded enough to act to ease the impending shortage without profiting from it. More likely, the lesson he learned was not to show so much initiative.

The example illustrates one of the main economic arguments why price gouging legislation is misguided. The essential problem that gives rise to the price increases that trigger allegations of price gouging is a shortfall of supply relative to demand. Such situations can arise either because of a supply disruption (such as the effects from hurricanes and other natural disasters on petroleum operations) or a sudden increase in demand (such as the effect of the COVID-19 crisis on the demand for personal protective equipment). The price increases that are the natural market reaction to shortages provide an incentive to bring new supplies to market, thereby easing the shortage.

The other main argument for allowing market prices to rise is that it provides an incentive to conserve scarce supplies and prevent hoarding, a real phenomenon that exacerbates shortages. The toilet paper and paper towel shortages that arose in the early days of the COVID-19 crisis are a prime example. There, mere concerns about a shortage (rather than an actual shortage) caused a run on available supplies followed by general unavailability.

B. Qualifications about the Social Desirability of the Market Outcome

In the same address in which Solow asserted that economists admire "*the efficiency, anonymity, and subtlety*" of competitive market outcomes, he also observed that economics provides a foundation for questioning these outcomes' desirability and formulating policies to improve upon them.

One of the objections to competitive market outcomes that one sometimes hears stems from the above-cited Kahneman, Knetsch & Thaler results about public attitudes towards price gouging. Even though economists talk of "market responses" to shocks, the "market" represents

6 See "The Federal Trade Commission Investigation of Gasoline Price Manipulation and Gasoline Price Increases: A commission Report to Congress," May 2006, available at https://www.ftc.gov/reports/federal-trade-commission-investigation-gasoline-price-manipulation-post-katrina-gasoline (last accessed July 7, 2020).

7 See Salinger, Michael A., "Economics Supporting the Twin Missions of the FTC," 2007, https://www.ftc.gov/sites/default/files/documents/public_statements/economics-supporting-twin-missions-ftc/070420breakfast.pdf (last accessed May 30,2020).

the collective response of individual consumers and businesses. A market price increase occurs only if sellers in the market choose to raise their prices. The question Kahneman, Knetsch & Thaler asked survey respondents about raising the price of snow shovels (by even a modest amount) in a snow storm was just one of a series they asked about the ethics of decisions businesses have to make for markets to respond to market forces in ways predicted by a model of competition. They found that what respondents to their survey found to be ethical or unethical deviated in some (but not all) cases from what economists would consider to be the business decisions needed for the efficient functioning of competitive markets.

In evaluating the Kahneman, Knetsch & Thaler results, it is important to distinguish between the implications for individual businesses and for public policy. Kahneman, Knetsch & Thaler themselves made this point. Echoing an argument that Arthur Okun had made previously,[8] they argued that some businesses would rationally forego price increases during a shortage to avoid the loss of reputation they would suffer from taking actions that their customers would find unethical.[9] This concern was evident after hurricanes Katrina and Rita. Under normal circumstances, the price of branded gasoline exceeds the price of unbranded. In its report on the performance of gasoline markets after the hurricanes, the FTC found that this relationship was inverted. Branded prices were below unbranded prices, which may have been because the branded suppliers exercised price restraint to avoid the appearance that they were taking undue advantage of an event that caused great suffering.

If businesses are reluctant to raise prices to market-clearing levels out of concern for alienating their customers then, even in markets where laws do not prohibit price gouging, physical shortages arising from a shock to supply or demand will result in market shortages (meaning demand exceeds available supply at observed market prices and, therefore, there are willing buyers unable to attain supplies). The hypothesis that businesses temper price changes to maintain their reputation provides a potential explanation for the fundamental macroeconomic problem of why markets do not always clear.

But the problem facing individual businesses and the public policy problem are different. The possibility that individual businesses might be reluctant to raise prices to levels needed to eliminate shortages is not an argument for legally preventing businesses that wish to raise prices from doing so.[10]

But there are other valid economic reasons unrelated to the Kahneman, Knetsch & Thaler survey respondents' perceptions of ethical business behavior for questioning whether the right public policy is simply to let the market work. The economic principles that imply the efficiency of competitive markets rely on a specific definition of efficiency known as the Pareto principle. It states that an allocation of scarce resources is efficient if no feasible reallocation of resources could make one person better off without making someone else worse off. The idea that a competitive market could achieve (or even approximate) a Pareto efficient allocation of resources is arguably the most important idea in economics, and it provides an intellectual foundation for relying largely on markets to guide economic activity. Remarkable as that result is, it comes with a well-known caveat. A Pareto efficient outcome might entail a distribution of income that society judges to be unacceptable (or at least suboptimal and worthy of intervention that sacrifices some efficiency for increased fairness).

A key feature of the market outcome when market prices adjust to clear all markets is that the scarce supply of a good is allocated to those who value them most, where value is measured by consumers' willingness to pay for the good (i.e. the consumer willing to pay $4 for a gallon of gasoline must value gas more than the consumer only willing to pay $3). This happens because the only people who voluntarily buy in a competitive market are those who value a good at more than the market price. To take an example that has played prominently in the news, a wealthy person who believed President Trump about the potential value of hydroxychloroquine as a remedy for COVID-19 may have been willing to pay more for it to use in case he got COVID-19 than a poorer lupus patient who got real relief from his condition from the drug.

Another problem associated with the shortages that arise in times of crisis is that large price changes can alter real incomes. Nominal income is income measured in currency units. But people do not consume money. A person's real income is the goods and services that she can purchase with her nominal (money) income. When prices of what a person buys go up, her real income drops because she can no longer buy the

8 Okun, Arthur, "Prices and Quantities: A Macroeconomic Analysis," The Brookings Institution, 1981.

9 Of course, one might suspect that running out of an essential supply during a shortage might also cause a loss in reputation, but it is at least plausible that businesses would decide that the loss of reputation from appearing to take advantage of their customers would be worse from the loss of reputation for maintaining insufficient inventories.

10 Some laws do enforce community standards for ethical behavior. Laws against "indecency" make it illegal to be naked in public. But one can justify such laws on the grounds that public nudity creates negative externalities. With price gouging, the externality argument goes in the other direction. A business's reluctance to alienate one customer by charging a market-clearing price hurts subsequent potential customers who are then unable to buy.

same basket of goods and services. Increases in the prices of "necessities" are particularly burdensome on the poor because those items take up a bigger percentage of their budget than is the case for richer people.[11] And, of course, a reduction of real income for someone who is already at the lower end of the income distribution can make her unable to afford necessities like food, shelter, and medicine, whereas richer people can cut back on luxuries. Prior to the crisis, the income of the lupus sufferer might have been sufficient to cover his medication and sufficient food, shelter, clothing, health care, and other necessities. A big increase in the price of hydroxychloroquine could make it impossible for him to purchase the same basket of goods that he had previously been able to buy and present a choice between foregoing his lupus medication and going hungry or homeless.

A common economic argument about this problem is that it can be ignored because additional income policy (through the tax system and income support programs) can achieve a socially desirable distribution of real income while unregulated markets sort out the details of what goods are produced and who gets the available supply. For short, localized market disruptions such as hurricanes, however, there may not be a practical way to put in place the mechanisms needed to provide income support just to those who are affected.

III. PRICE GOUGING LAWS BY THEMSELVES DO NOT IMPROVE EITHER FAIRNESS OR EFFICIENCY, BUT ALTERNATIVES TO THE MARKET TO ALLOCATE SCARCE RESOURCES DO EXIST

By itself, a law against price gouging does not solve the problem that the market allocation with market-clearing prices of a temporarily much scarcer resource is unethical or unfair. Whether or not prices are allowed to rise to market-clearing levels, the resource will be scarce. When prices rise to equate supply and demand, available supplies go to those willing to pay the most (who may be disproportionately rich). When prices do not rise to equate supply and demand, the scarce supplies go to those who get to the store first; and those who get to the store first might horde available supplies if they expect the shortages to last, thus preventing a wider and fairer distribution of the supplies that are available. Moreover, not allowing prices to rise eliminates the incentives the market provides to increase supplies. As noted earlier, the Florida truck owner wouldn't have driven to North Carolina for generators and other businesses may similarly be discouraged from making investments that expand output. These outcomes are neither fairer nor more efficient than the outcome with market-clearing prices.

In World War II, the United States solved (or at least tried to solve) these problems through rationing of some food items (such as meat and sugar) as well as some non-food items (such as gasoline, tires and shoes).[12] That approach required the time to set up an administrative apparatus for determining the allocation of supplies and developing a way for consumers to spend and for merchants to accept allocations. (In World War II, consumers were issued ration books.) The war-time shortages lasted longer than those that typically arise with weather events, so there was time to put in place the administrative apparatus to implement rationing. But, as the WWII example illustrates, there is an alternative to market allocation of scarce supplies.

11 For example, suppose two households whose incomes are $40,000 and $60,000 each spend $20,000 annually on food. If the food prices increase by 10 percent and the two households are forced to spend $22,000 annually on food, the inflation has decreased the leftover money the poorer household has to spend by 10 percent ($2,000 divided by $20,000) and the leftover money the richer household has to spend by only 5 percent ($2,000 divided by $40,000).

12 See, e.g. https://www.history.com/news/food-rationing-in-wartime-america.

IV. POLICY IN THE COVID-19 CRISIS

Turning to the COVID-19 crisis, there were three major developments that any assessment of the optimal policy must consider:

1. Congress was able to pass legislation to increase people's nominal incomes quite quickly. Not only did it increase both the amount and duration of unemployment benefits, it provided for a $1,200 payment per adult and $500 per child stimulus payment for all people with incomes below a certain threshold.[13]

2. Despite the substantial disruption to the distribution that had occurred through brick-and-mortar retailers, on-line retailers – most notably, but not only Amazon – and the distribution systems that supported them performed remarkably well. Interestingly, Amazon placed its own restrictions against price gouging by merchants using its platform to sell items high in demand during the COVID-19 pandemic, such as face masks and sanitizers.[14]

3. Hospitals and other medical facilities faced shortages of key supplies such as PPE and ventilators that they needed to meet the surge in demand to treat COVID-19 patients.[15] The competition among them to obtain these supplies drove prices up substantially.

The first two of these are strong evidence that when governments can provide income support quickly, markets are an efficient way to allocate resources, even (and perhaps particularly) when supplies are scarce. The COVID-19 crisis destroyed (temporarily, hopefully) a substantial fraction of the productive capacity of the economy. The economy's capacity for delivering entertainment events (such as concerts, plays, sporting events and theatrically-viewed movies), in-restaurant dining, airline travel, and hotel accommodations was largely or entirely idled. Among the sectors affected was the distribution sector as many brick and mortar retail establishments had to close. Even brick-and-mortar retailers that remained open, such as grocery stores, had significantly diminished capacity as the need for customers to observe physical distancing and to alter packaging and check-out procedures reduced their feasible throughput. The acceleration of a long-term trend of direct-to-home delivery for in-store shopping will go down as one of the most significant economic developments from the crisis. That Congress was able to quickly provide income support only facilitated this acceleration. Not only did the increased reliance on direct-to-home delivery significantly mitigate the economic hardship, it may well have helped slow the spread of the disease.

In its first quarterly earnings announcement after the shut-downs in much of the world occurred, Amazon reported a reduction in both operating income and net profits despite a 26 percent increase in sales.[16] It is interesting to speculate about what the public policy reaction might have been if Amazon had not placed restrictions on price "gouging" on its platform and if its income had risen significantly. After hurricanes Katrina and Rita, the first quarterly earnings announcements of the major oil companies triggered a strong political backlash that included contentious Congressional hearings and the Congressional mandate to for the FTC to investigate the oil industry. With the increase in the prices of crude oil and refined products that followed, it would have been a sign of gross managerial incompetence if the profits of oil companies did not increase. Indeed, the increase in profits that followed from the hurricanes was evidence of the competitiveness of the markets. The exercise of market power by the oil companies would entail reducing output to increase profits. As a result, it should come as no surprise that the reduction

13 https://en.wikipedia.org/wiki/CARES_Act.

14 Nicas, Jack, "He Has 17,000 Bottles of Hand Sanitizer and Nowhere to Sell Them," The New York Times, March 14, 2020, available at https://www.nytimes.com/2020/03/14/technology/coronavirus-purell-wipes-amazon-sellers.html.

15 See, e.g. the United States Dept. of Health and Human Services' "Hospital Experiences Responding to the COVID-19 Pandemic: Results of a National Pulse Survey March 23-27, 2020," available at https://oig.hhs.gov/oei/reports/oei-06-20-00300.asp.

16 Weise, Karen, "Amazon Sells More, but Warns of Much Higher Costs Ahead," The New York Times, April 30, 2020, available at https://www.nytimes.com/2020/04/30/technology/amazon-stock-earnings-report.html.

in output caused by the hurricanes had the same profit-raising effect as the exercise of market power would have had.[17,18] And the FTC found evidence of significant efforts by the industry to increase supplies (by, for example, foregoing scheduled refinery maintenance and hiring tankers to divert supplies from Europe) and to reallocate available supplies within the U.S.[19] Yet, while these responses eased the economic damage that resulted from the physical damage caused by the hurricanes, there were political points to be scored by accusing companies like Exxon-Mobil of price gauging. I have no factual basis for concluding that Amazon took explicit actions to report a reduction in earnings, but avoiding the political backlash that might have ensued from an increase in earnings may well have been a silver lining.

The speed with which Congress passed and the Federal government was able to implement stimulus payments will also go down as an important lesson for public policy when future crises hit. There were elements of the crisis that may not be present in future events that give rise to significant shortages. The COVID-19 crisis might well last longer than disruptions that occur to weather events. It was a nationwide crisis, which simplified the determination of who was eligible for support and broadened the political appeal for support. Still, the episode will serve as an example in which cash support successfully (even if imperfectly) used to deal with issues of fairness without interfering with the normal workings of markets to determine the allocation of scarce resources.

V. THE HEALTH CARE SECTOR EXCEPTION

The COVID-19 crisis substantially increased the demand for PPE and ventilators. The Federal government had maintained a stockpile of both, but that stockpile was inadequate to meet the surge in demand. The Federal government left it to the states to obtain additional supplies. According to press accounts, competition among the states (and between the states and the Federal government) caused significant price increases.[20]

Again, simply imposing a prohibition on price gouging would not have helped. The problem was the shortage, and price gouging laws would neither solve the shortage nor necessarily result in a fairer allocation of available supplies. But the question remains as to whether simply letting the market work was the optimal policy or, alternatively, whether the Federal government should have imposed some other allocation mechanism. In particular, would it have improved matters if the Federal government had taken over the procurement of PPE, ventilators, and perhaps other medical supplies and equipment needed in the crisis and then distributed them based on factors such as the number of cases, the number of hospitalizations, and so on? There are several reasons why such an alternative would have been superior.

First, a major reason for questioning the efficiency of market outcomes is the presence of externalities. They are abundant with health care supplies and particularly with respect to PPE. Health care institutions treating patients with the COVID-19 virus were inherently potential hot spots for spreading the virus if infected patients infected health care workers who in turn infected more patients. A classic article about efficient policy toward externalities is Coase's "The Problem of Social Cost."[21] That article is widely misinterpreted to mean that market outcomes are efficient as long as property rights are well defined (and regardless of the initial assignment of property rights). This "principle," commonly called the "Coase Theorem," requires the assumption that there are zero transaction costs. The point Coase made in the article was, however, exactly the opposite of what the Coase Theorem would seem to imply. In the article, Coase argued that because transaction costs exist in real markets, the allocation of property rights does affect the allocation of resources. As a result, assigning property rights to goods to the efficient users (i.e. allocating PPE to the health care institutions that will benefit from them most) can be necessary for an allocation to be efficient.

17 The Federal Trade Commission Investigation of Gasoline Price Manipulation and Gasoline Price Increases: A commission Report to Congress, at Chapter 7, § II.

18 I do not want to overstate this point. According to basic economic principles, if the oil companies were able to restrict output to monopoly levels (or near monopoly levels), a reduction in output caused by the hurricanes would have lowered industry profits. But the prices of oil and refined products are nowhere near monopoly levels. A basic economic principle states that a monopolist (or a perfectly colluding oligopoly) does not operate in the inelastic region of its demand curve. It is widely accepted (based on econometric estimates) that the elasticity of demand for crude oil and major refined products at the prices that have prevailed for many decades is inelastic. The dramatic reduction in oil prices during the COVID-19 crisis are further evidence of the low elasticity of demand. Thus, the market evidence is that oil prices have not been at or near the monopoly level. But that result does not rule out the possibility of some exercise of market power in the oil industry. Given the size of the markets, even slight output restrictions below competitive levels could cause major profit increases for oil companies paid for by consumers through higher prices.

19 The Federal Trade Commission Investigation of Gasoline Price Manipulation and Gasoline Price Increases: A commission Report to Congress, at Chapter 5, § VI.

20 See, e.g. Nicas, Jack, "It's Bedlam in the Mask Market, as Profiteers Out-Hustle Good Samaritans," The New York Times, April 3, 2020, available at https://www.nytimes.com/2020/04/03/technology/coronavirus-masks-shortage.html.

21 Coase, Ronald H., "The Problem of Social Cost," The Journal of Law and Economics, Volume III, October 1960, pp. 1-44.

Second, as Hayek argued, a significant rationale for using markets to solve the problem of how to allocate scarce resources is the virtually infinite complexity of the problem when viewed on the scale of the entire economy.[22] In contrast, the allocation problems with respect to PPE and ventilators are relatively simple. The number of goods, the number of significant supply sources and the number of health care and other organizations most in need of the supplies are all relatively small.

Third, rational bases for distributions were available. The incidence of people infected with the virus and hospitalizations related to the virus varied substantially across geographic areas. Even if the measures were imperfect, they were good enough to provide reasonable estimates of the variation in need across states.

Fourth, the health care sector already is so plagued with distortions arising principally from third-party payers (i.e. insurers) that the argument that the market outcome from letting the market work is much flimsier than is generally the case.

Fifth, the health care sector is already one in which, as a society, we have decided in some cases not to rely on markets to allocate scarce resources. A prime example is the market for organ transplants, where there is an allocation mechanism in place based on medical criteria. This system is, of course, controversial. But the ethics of which COVID-19 patient gets a respirator and which patient with renal failure gets a kidney transplant are closely related. If, as a society, we do not rely on the market in the latter case, we should not rely on it in the former case either.

VI. CONCLUSIONS

As with previous shocks to supply and or demand resulting in shortages, the COVID-19 crisis has given rise to allegations of price "gouging." There might be valid reasons for individual businesses not to raise prices to market-clearing levels, but legal prohibitions against price gouging by themselves serve no useful purpose as they improve upon neither the efficiency nor the fairness of market outcomes.

But the concerns about price gouging raise the more general issue of the efficient way to allocate scarce resources during times of emergency. I have argued that the evidence from the COVID-19 crisis provides strong support for the proposition that largely unregulated markets are the most efficient way to allocate scarce resources and that the argument is stronger during times of disruption than in times of relative stability. While market outcomes can create concerns about fairness, Congress was able to pass income support programs that addressed fairness issues in a way that was almost surely more efficient than trying to micromanage the distribution of goods (and services).

The health care sector provides a possible notable exception to this broad principle. There, a program for national procurement and distribution of supplies of items like PPE would likely have been superior to having the states individually arrange for their own supplies in competition with each other.

22 Hayek, Friedrich A., "The Use of Knowledge in Society," The American Economic Review, Vol. 35, No. 4, pp. 519-530.

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