



**KENNESAW STATE
UNIVERSITY**

COLES COLLEGE OF BUSINESS
*Bagwell Center for the Study of Markets
and Economic Opportunity*

Commentary

Title:

*"Price Gouging' in the
Wake of a Natural
Disaster: A Brief
Economics Lesson"*

Author(s):

C. Slade Dale

October 2024

Motivation

Consider for a moment that you are a king. You are the sovereign over all people in a vast territory. Consider also that you are self-interested, and that your chief goal is to maximize your benefit above all else. Naturally, you would exploit your subjects until there was nothing left, right? *Wrong.*

Imagine that you did exploit your subjects to this extreme degree; what would eventually happen? Well, they might move to a different kingdom; they might rebel and revolt; they might die of starvation. Regardless of the “how,” it is plain to see the “what”: you (the self-interested despot) have made yourself worse off in the long-run than you would have otherwise been if you instead had present, amenable, living subjects from whom to collect tribute. So, you won’t grind under your heel those on whom you depend for your own well-being. Rather, you will see to it that they have their needs and wants sufficiently fulfilled, so that in turn they will help you fulfill your needs and wants.

Now consider that you are not a king, but are instead sovereign over only your own decisions and choices. The same principles apply. The best way to ensure your long-term well-being is by seeing to the well-being of others. While Adam Smith’s illustration of the butcher, the brewer, and the baker may seem heartless, it is no such thing. In the provision of our dinner we see clearly principles that I hope to draw out for you throughout this article—namely, response to incentives and self-interest as primary engines fueling the activity of markets.

Introduction

This article is the first in a series of “Brief Economics Lessons,” using basic economic principles to analyze real world phenomena. The analysis is done at a foundational level, providing a robust introduction to the economic way of thinking without requiring a deep knowledge of econometrics (for empirical work) or advanced maths (for theoretical work).

As the dust settles from the melee unleashed by Hurricane Helene, old fears about that dreaded business practice have resurfaced.¹ What is Price gouging? Before going any further, it is important to define price gouging so that we have a working definition on which to draw our analysis and comparisons. Zwolinski(2015) explains price gouging as occurring “when in the wake of an emergency, sellers of a certain necessary goods sharply raise their prices beyond the level needed to cover increased costs.”² From here we can clearly see that the notion of “price gouging” is both vague and morally charged. It is precisely this perfect storm of characteristics that has made “price gouging” the subject of so much scrutiny and debate.

As I will explore throughout this piece, what many describe as price gouging may sometimes be best characterized as a sudden and drastic change in the structure of a market, and the natural set of consequences that follow. Here, I do not necessarily mean “consequences” in the usual negative tone. Rather, I mean consequences as being the effects that follow some determined cause. In particular, I want to provide one possible theoretical view of “price gouging” following a natural disaster and why it may be imprecise (to say the least) to characterize it as such. Using basic economic theory, we can easily see that what many term injustice, is really the predictable action of self-interested people responding to a series of incentives and signals.

¹ See, for example, “Attorney General Josh Stein Provides Updates on Price Gouging and Helene-Related Scams.” (<https://ncdoj.gov/attorney-general-josh-stein-provides-updates-on-price-gouging-and-helene-related-scams/>).

² Zwolinski M. The Ethics of Price Gouging. *Business Ethics Quarterly*. 2008;18(3):347-378. <https://doi.org/10.5840/beq200818327>.

Perfect Competition: From Riches...

To begin our thought experiment, let us imagine a city. The city has multiple neighborhoods and boroughs, each with its own distinct flavor and style. Do you have something in mind? For myself, I picture my capital city of Atlanta, a city bustling with activity, but lousy with urban sprawl and all the accompanying ailments—traffic, low air quality, etc. (but that is beyond the scope of this paper).

While the cities we each imagine may be vastly different, in the face of a natural disaster, perhaps all cities will share remarkably more characteristics than under normal circumstances. Inside the city in your head there are myriad stores and shops and vendors and sellers of all kinds, from convenience stores to bodegas to big box stores that carry everything you could ever want and more. Let us assume that there is considerable overlap in inventory between these stores (each store sells identical products), and we begin to see that no seller has a significant advantage over another, and that no individual seller has the power to influence price to a large degree. Following this logic through to its conclusion, we see that each seller will be forced to charge very similar prices, or be at risk for losing most of its customers.

We also see that the output of each firm will be a quantity for which marginal cost is equal to this market price.³ Sound familiar? If you have taken an introductory economics course, it should! This is sounding more and more like the market structure of perfect competition. For argument's sake, let us go ahead and assume that the city we have imagined is indeed perfectly competitive. Also for argument's sake, let us assume that we are examining a particular market—the market for bottled water. From there, we can consider the model in Figures 1 and 2.

Figure 1
Competitive Market for Bottled Water

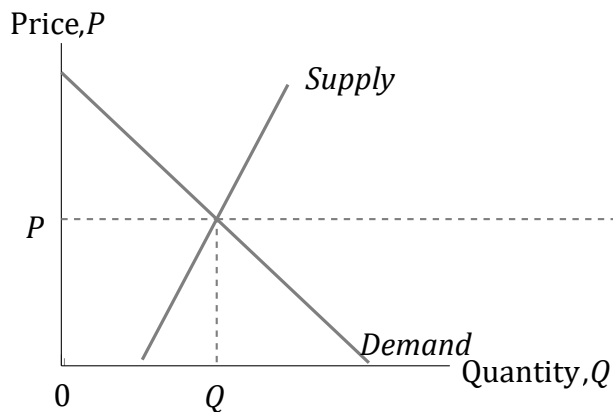
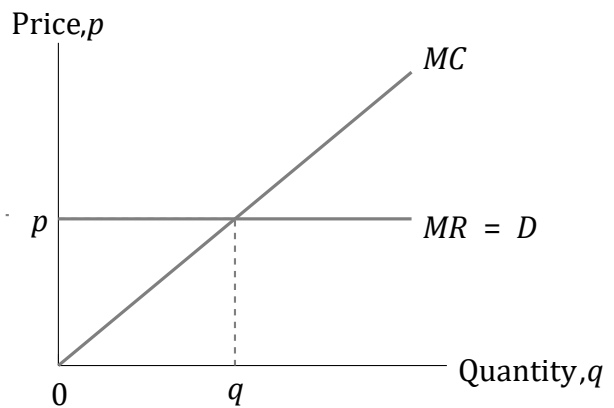


Figure 2
Typical Firm in Competitive Market



While simple, this model provides us with powerful insights. First, we see the implications of our market where no seller has influence over price.⁴ Because all sellers offer identical products, and because buyers are rational and will only pay the lowest price for the product, competition

³ There are several ways in which this scenario quickly breaks down, not the least of which is that I have not presented a perfectly competitive market, but rather an imperfectly competitive market with many competitors. This is known as “monopolistic competition.” However, for the sake of argument, let’s imagine that the city I am describing exhibits the characteristics of perfect competition so that the theory plays out and we might make meaningful inferences from it.

⁴ We call the ability to influence the market price “market power.”

from the substitute goods forces sellers to adhere to one price. This price is set by the market forces of supply and demand. Any attempt by a seller to raise his price will result in a loss of all his customers (and therefore all his revenue). Similarly, any attempt by a buyer to bid down the price will result in not being able to consume a good he would have otherwise consumed.

The important thing to note about the perfectly competitive model is that each buyer who is willing to voluntarily pay the market price is guaranteed access to the good at the market price. Any buyers for which the market price exceeds their valuation of the good are free to walk away, thus eliminating all deadweight loss (i.e., inefficiency). The same goes for sellers: any seller for which the market price is less than their cost of production is free to not participate in market activity.

The Monopolizing Event

This article is titled “‘Price Gouging’...A Brief Economics Lesson,” but perhaps it should be titled something like “A Foundational Look at the Economics of Sudden Exogenous Shocks on Market Structure and the Resulting Price Differentials.” But alas, I’m not even sure I know what all those words mean (plus it would take up too much space on the title line). I wish to consider “price gouging,” not as some predatory practice, but rather, a natural reaction to some specific chain of events by rational economic agents. Specifically, I want to examine the possible effects of a natural disaster on market structures in the affected areas.

Recall our city, sprawling and vast. Also recall that our market is perfectly competitive—no individual market participant (seller or buyer) has any power over market price. Now suppose that a disastrous weather event decimates the city’s infrastructure, destroys homes, disrupts supply chains, etc. Also, recall our typical firm selling bottled water in a competitive market filled with perfect substitutes. Now imagine that those substitutes are gone—whether destroyed by nature, or emptied of stock due to supply disruptions. What do you have left? The last remaining firm has effectively consolidated market power and found itself as being a monopoly. Or suppose that, instead, buyers lose access to transportation due to the weather event, causing transportation costs to rise and affect mobility, thus restricting access to substitutes. Now, you have geographic monopolies. Whichever the cause (and it may be both!), the effect is the same.

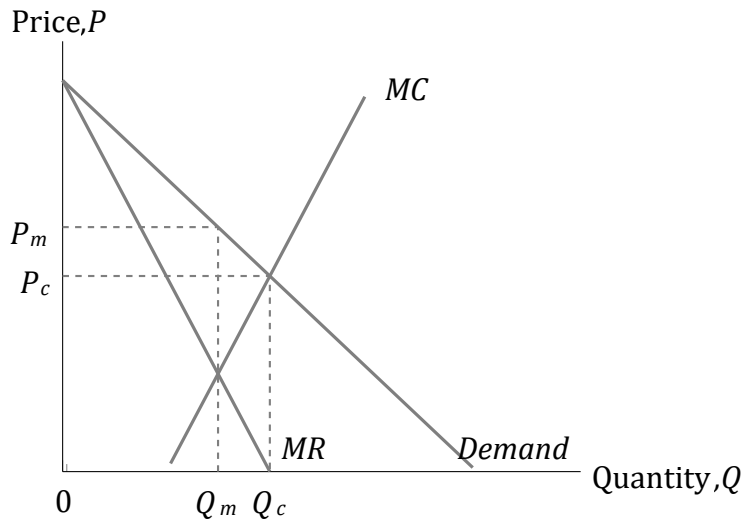
What does basic economics tell us about monopolies? First and foremost, we know that—just like perfectly competitive firms—monopolies seek to maximize profit. Second, we know that—in contrast to perfectly competitive firms—monopolies have the ability to influence market price in pursuit of said profits. The question is, will they?

Monopoly: ...to Richer!

While admittedly nontraditional, we call these events “barriers to entry.” Simply put, they allow for the consolidation of market power by one firm (or a few firms who grow very large), enabling that firm to extract positive economic profits above and beyond what could be earned by a competitive firm. We call this additional money “monopoly rent,” and it is the thing that gives monopolies a bad reputation.⁵ Referring to Figure 3, we observe the effects on price and quantity of changing market structure from perfect competition to monopoly.

⁵ Well, that and deadweight loss. But more to come on that later

Figure 3
Competitive Market vs Monopoly



Notice how the monopolist charges a higher price than the competitive market and produces less output. Why? Is the monopolist “evil”? Are they “price gouging”? By no means! The monopolist here is simply responding to the incentives provided by the market. Notice how the monopolist isn’t able to charge whatever price and sell whatever quantity they want. No, they are forced to select a price/quantity-combination on the demand curve. The market still places guardrails around even the monopolist, preventing this toothless tyrant from grinding consumers under its heel.

The first key observation I wish to make is that there is no “price gouging” going on here. What we see in this illustration is not a seller preying on the consumers by needlessly raising the price, but rather the amoral actions of a profit-maximizing firm attempting to achieve its goal. Here we have a producer/seller, who is providing a desirable good to consumers (albeit a smaller subset of the original market) at or below their respective willingness to pay. Nobody is being forced to participate in market activity that would harm them economically. While it is true that the new price of bottled water (to return to our example good) is higher than prior to the monopolizing event, what is also true is that no buyer is now paying a price above what she or he is willing to pay. Further, from an allocative standpoint, those buyers who get to consume the water are the ones who value it the most (i.e., those who have the highest willingness to pay).

The second key point that I feel needs mentioning is the welfare effects of a monopoly. It’s no secret that a monopoly charges a price greater than a competitive market—this is to be expected and is not necessarily a bad thing in and of itself. But we cannot neglect that the monopoly also restricts output to lower than competitive levels, generating an amount of welfare loss, known also as “deadweight loss” (as shaded in Figure 4).

This welfare loss is a concern for many economists because of its meaning: inefficiency. The existence of welfare loss is a clear signal that resources are not being efficiently allocated, and that production and consumption are occurring at a suboptimal level—specifically, at a level below that which is collectively best for the buyers and sellers. This is because there are some units that the seller chooses to not provide, even though a buyer values the item at an amount greater than the firm’s marginal cost. To maximize social gains from trade these units would have to be provided, but the profit maximizing monopolist has no incentive to bring them to market. Notice that the welfare loss occurs over the portion of the demand curve that has been excluded from participating in market activity due to the consolidation of market power.

Figure 4
Welfare Loss of Monopoly

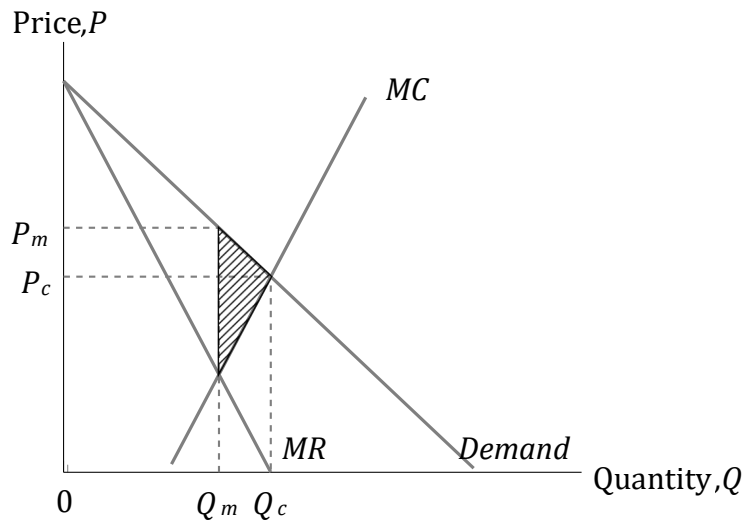


Figure 4

To Intervene, or Not to Intervene?

At last we come to the end of the discussion: regulation. We have already established that "price gouging" is a non-issue in this disrupted market. All we have is a single firm with power acting in its own best interests. But in that endeavor, the monopolist has generated inefficiency, and *that* should be the guide for any regulatory action. What's the difference? Anti-price gouging laws are overly vague, morally charged, and seek to punish sellers if they do not fall in line with the objectives of the ruling authority.⁶ Regulating a monopoly to allocate resources, goods, and services efficiently is dispassionate, not punitive, and seeks to enlarge the economic gains for society as a whole.

As can be gathered, I am not necessarily opposed to regulation in this situation, however I think it worth exploring all the options. The first option that many will jump to is a tax on the monopolist. However, any Principles-level economics student can explain that a tax on the seller would only further drive-up prices and further reduce quantity. Instead consider the following three options:

- **Option 1** Regulate the monopoly such that it is allocatively efficient. This would require setting a price ceiling for the monopolist equal to the competitive equilibrium price (where the monopolist's demand equals marginal cost). The downside to this regulation is that it may result in the monopolist earning a loss. If this were the case, then (unless a subsidy was paid to the monopolist to offset the loss) the monopolist would exit the market and buyers would be stranded with no access to the good (e.g., bottled water after a hurricane), making them even worse off than they would be under the monopoly outcome.

⁶ For example, Georgia (like many states in the U.S.) has an anti-price gouging law on the books, particularly if there is a declared State of Emergency (see: <https://consumer.georgia.gov/consumer-topics/price-gouging>). However, the restriction is very ambiguous and subjective. For example, it is entirely up to the Governor to decide which goods are subject to restrictions on price increases, based upon what goods he deems "...to be 'necessary' to preserve, protect, or sustain the life, health, or safety of persons or their property." Additionally, once price gouging is prohibited, "Violators can be fined from \$2,000 to \$15,000 *per violation*" (emphasis added).

- **Option 2** Regulate the monopoly such that it is *more* efficient, but does not earn a loss. This is known as fair return pricing. This requires setting a price ceiling at the price where the monopolist's demand and average cost are equal to each other. Here the monopolist has no incentive to exit the market (earns a normal profit), but still is able to put money in the bank (positive accounting profit). The upside is that (under reasonable assumptions on costs) deadweight loss is reduced without requiring a wasteful subsidy. The downside is that there will still be some deadweight loss after all is said and done.
- **Option 3** Do nothing! This is likely the best option given the fact that neither the government nor the monopolist likely knows the monopolist's costs accurately enough to guarantee a correct placement of the price ceiling, especially in such a volatile situation as might be present following a natural disaster. Additionally, as disaster cleanup progresses, barriers to entry will be eradicated, and more sellers will re-join the market, thus restoring the competitive nature of the original market. (And in fact, the temporarily high, uncontrolled price—which allows the monopolist's profit to be so large—provides the greatest incentive for competing sellers to surmount the entry barriers as soon as possible, thereby minimizing the amount of time during which society suffers the monopoly deadweight loss.)

Conclusion

So, there it is. We have clearly made a case against the practice of “price gouging” following a natural disaster. Rather, what we have shown is that any increases in price are due to structural market changes, namely, the consolidation of market power into one firm, or a handful of regional monopolies as transportation costs make seeking out substitutes untenable. In this scenario, anti-price gouging laws are potentially harmful: they not only jeopardize a seller acting as we would expect, but also may hurt consumers if the seller chooses to shut down due to overly harsh and punitive regulations, thus eliminating any market-based access to basic necessities.