The Free Market Fallacy[1]

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INTRODUCTION

Most Americans are concerned about how equitable our economic system is. Seventy percent of Americans (including 50% of Republicans and 86% of Democrats) believe that it is not fair, and that our economy favors the wealthy and powerful[2]. It is not too hard to see why: wages, which tracked increases in productivity until the mid-1970's, have flatlined as productivity has continued upward[3]; per-capita health costs have increased more than five-fold since the 1970's[4]; income inequality has been on the rise, with incomes for the top 1% increasing five times as much as incomes for the bottom 90% of workers[5].

One broad economic phenomenon that contributes powerfully to all these trends is the declining competitiveness of our markets. Here, we are referring to **market** competitiveness, which means how much competition a firm faces from rivals – the more rivals, the more competitive the market. A CEO or industry leader, on the other hand, tends to view their *firm* or *industry* as more competitive the fewer rivals they have. At least five major sectors of the economy are now considered "highly concentrated" by DOJ guidelines[6], which means they are effectively controlled by four or fewer large firms. These sectors – manufacturing, retail, utilities, finance and services – account for over two-thirds of total U.S. corporate profits[7]). And 75% of our industries have become more concentrated over the last two decades[8].

Unfortunately, discussions of market competitiveness tend to be oversimplified, dividing what is in reality a spectrum of competitiveness and appropriate scale into points at the extremities. Some believe that most markets *already are* competitive, or will self-correct toward being so, and that, therefore, there is little to no need for government regulation, since competitive markets maximize benefit to society (i.e. "free market" advocates). Others believe that most markets *trend toward concentration* and away from competitiveness, and advocate social ownership to avoid the dangers of unchecked market power (i.e. socialists).

Most of our economy, however, lies between these two points. Barriers to entry and other factors keep many markets from being highly competitive, creating a need for regulation. And being highly competitive is not necessarily desirable for all markets, since taking advantage of economies of scale and incentivizing innovation require less competitive levels of market concentration or scale. In fact, different industries have different levels of societally "optimal firm scale" – scale here is a convenient shorthand for the level of concentration in the industry -- and either exceeding this level or undershooting it reduces total benefit to society.

By exploring this spectrum of market competitiveness through examples in six industries, we can better understand when, and what type of, regulation may be needed, based on the type of industry. In each of these examples, we will see where optimal scale has been exceeded, and the costs that entails in terms of working poverty, overpriced healthcare, and environmental harm. And we will see how regulations targeted at increasing competition can efficiently address these issues.

THREE LEVELS OF "OPTIMAL SCALE" FOR THREE TYPES OF INDUSTRIES

As mentioned, industries vary as to their ideal level of market competitiveness. *Low-scale, low innovation* industries – e.g. commodities – provide the biggest societal benefit when their markets are highly competitive, as we will see, and this means that there are lots of competitors making similar products, plentiful information about the products and services available to consumers, and low to no barriers to entry. Profits are relatively small in a highly competitive market, but are acceptable to the mostly-small businesses that tend to comprise the vendors in these markets.

Industries with significant *economies of scale* maximize societal benefit when firms grow large enough to capture those economies, allowing them to pass considerable cost savings on to consumers, while increasing profits at the same time. The smaller number of vendors reduces the competitiveness of the market, however, meaning that regulations may be needed to protect workers, suppliers and/or consumers against abuses of market power. *High innovation* industries require a return on their investment in research and development to be sustainable, so society provides patent protection – the exclusive right to sell that product for a specified number of years – to enable that return on R&D.

How Competitive Commodity Markets Benefit Society

> *[T]he only way you can … make sure that businesses operate in the public interest is to force them to engage in competition, one with the other.* – Milton Friedman, 1978[9]

Economics tells us that, in low-scale, low-innovation industries, **competitive** markets maximize benefit to society, as long as no important costs are externalized. They most efficiently allocate resources, maximize production (which also maximizes employment), *keep consumer prices to a modest markup above cost*, and *pay workers closest to what their work is worth to the firm*. Interesting to note that Adam Smith was talking specifically about small business-dominated markets when he talked about the "invisible hand" effect of the unregulated, "free" market: a precondition for this beneficial effect in Smith's view was that "businesses are locally owned and managed".[10]

The reason competitive markets optimize societal benefit is that they maximize total societal "surplus", or total gains from economic activity. Because high degrees of competition force prices (or wages) to occur where the supply-demand curves intersect, total societal benefit is maximized. When competitiveness declines, firms are able to raise prices or lower wages, but must always reduce output (or the quantity they provide) in order to do so, thus creating a void in surplus, called the "deadweight loss", that *always* reduces total societal gains.

How Exploiting Economies of Scale Benefits Society

Some industries have inherent *economies of scale* that can provide an overall benefit to society. Here, a firm's cost curve has a portion that that slopes downward; this means that increasing the quantity an individual firm delivers can reduce the cost per unit, up to a certain point. Spreading the large *fixed cost* of capital equipment across a larger and larger number of units produced is one example, common in

manufacturing; other types of economy of scale include worker *specialization*, enabled by increased firm size, and industries with *network externalities*, where consumers can benefit more when more people use the same product (e.g. social media). Taking advantage of these economies of scale can be a **win-win-win** for consumer prices, wages, *and* corporate profits.

But even in these industries, the cost curve either flattens or begins to slope upward again at a point referred to as "minimum efficient scale", due to diseconomies of scale. Thus, the return to society peaks at a level of scale we will call S_{SO} to indicate the scale that is socially optimal. As we will see below, scale beyond those levels can increase profits, but reduces the total return to society.

How Incentivizing Innovation Benefits Society

Product innovation is highly valued by society, and even though such product differentiation reduces the competitiveness of the market, we are happy to extend patent protection (the right to be sole producer for a certain number of years) to provide incentives for more. Because most new products *are optional goods* when first introduced, we do not generally worry about limiting the market power that accrues to patented goods during the term of their patent.

But the exception alluded to is important: for *essential goods* (e.g. life-saving pharmaceuticals), limits on price setting power may be critical, because of both the *importance* of the good, and the *exploitability* of the market. For example, in the cases of water and electricity, municipalities typically either provide the good themselves or strictly regulate a monopoly provider, because of both factors. Cruelly, these two always go together: the more essential the good, the lower the price elasticity (i.e. the amount sales will be reduced if the vendor increases prices), meaning that firms can raise prices much higher in these markets without suffering much decline in demand.

Process innovation can give firms a cost or quality advantage that society similarly enjoys and wants to protect. While small cost improvements are central to keeping markets competitive, large innovations may enable a producer to beat the competition on cost and accrue significant market share. In general, society is happy to allow the profits from such improvements as a reward and incentive for more.

Firms earning a return on the capital required to exploit economies of scale, and firms earning temporary monopoly profits from patent protection, are what come to mind for many of us when we think of what companies do to earn high profits – investing in production technologies that reduce product prices; making better products, or inventing new ones; and devising process innovations that reduce costs, increase quality or improve service.

Even at "Optimal Scale", Protections Against Market Power Are Needed

But even at these levels of societally "optimal scale", market competitiveness may have been reduced enough to require protections for workers or consumers. In industries with economies of scale, it is often protections against wage-setting (or suppressing) power that are needed, as in many manufacturing industries. Here, workers' wages are high enough that raising the minimum wage cannot be of help, and unions must be relied upon to countervail the market power of the employers. "Countervailing" the market power of a concentrated industry with other large-scale firms or

organizations is quite common on the consumer side of our economy: big box retail countervails the market power of a variety of producing industries, and large insurance companies countervail the market power of concentrated hospital and physician groups.

We would expect that, in highly concentrated industries with considerable amounts of power in the labor market, like manufacturing[11], wages will be less than competitive-market rates, absent unions; when that is the case, unions act as a correction and raise wages upward toward the competitive rate. But unions have been in decline for decades, with private sector union membership rates falling by more than half between 1983 and 2015[12], and this has happened as employers have lobbied for right-to-work laws, and have legally and illegally worked to stymie union organizing efforts[13]. Wages have suffered as a result: if union density were as high as it was in the 1970's, workers in many manufacturing industries would earn $3,000 more per year than they do now, based on estimates from the Economic Policy Institute[14] and my own calculations.

For high *innovation* industries that provide *essential* goods, pricing protection may be necessary because of the particularly low price elasticity that is associated with such products. "Elasticity" tells us the percentage by which sales will decline if a firm raises prices by one percent, or how much employment will go up if we increase wages. In the pharmaceutical industry, for example, price elasticity is very low, about -0.16 to -0.20[15], meaning that firms can easily raise prices 5+ times as much as they could for a more optional good (with an elasticity, say, of -1), and still see little reduction in demand. While we understand that an adequate return on research and development is needed to encourage further innovation, this low elasticity (combined with firm-erected barriers to entry, described further below) is allowing pharma firms to extract supranormal returns on R&D: they capture about $65 billion in net profit[16] off about $70 billion in R&D[17] (a number which, some analysts argue, includes spending on activities better classified as marketing[18]), a return of over 90%.

The Importance of Internalized Costs

"Externalized costs" are costs of production or consumption that are not accounted for in the sales transaction, because neither the firm nor their suppliers have to pay that cost – someone else does. Polluting industries are common examples. A cost of production outside the market's control or influence is essentially a hole in the ability of the market to do its job, that of efficiently setting prices and allocating resources. Unchecked, this creates a powerful 2-driver positive feedback loop that inexorably increases the harm associated with the externalized cost: 1) a societal harm is allowed without providing for the resources needed to ameliorate it, and 2) the lower price enabled by this drives consumption of the final good (and thus societal harm) ever upward.

While externalizing industries will often argue that internalizing those costs would harm the economy, say by cutting jobs, there is reason to view these claims with a skeptical eye. Net job losses are not a given, since we would expect the internalization of costs to shift resources (and jobs) to industries with less severe externalities; in other words, fully internalized costs *allow markets to do their job* of allocating resources for maximum social benefit. This is exactly what happens with a pollution tax, according to a study from Resource for the Future and the University of Maryland: they found that, while the tax does cause a reduction in employment in the polluting industry, the reduction is offset by increased employment in non-polluting industries.[19]

A focus on competitive markets also helps minimize externalities, as polluting firms in concentrated markets have much higher incentives to keep costs externalized than firms in competitive markets do. Consider a competitive market with externalities that have already been taxed, in order to pay for cleanup. Here, firms have less reason to lobby for the tax to be removed *because they don't get to keep the difference* if it is: if they try to keep their price high, they will lose a lot of business to lower priced competitors. Certainly, firms in even competitive markets have some incentive to resist a pollution tax or similar regulation, as they suffer from lowered demand when a cost is internalized, but profit pressure is lower, resources to invest in lobbying and advertising are smaller, and less ability to strategically interact means less ability to pool resources.

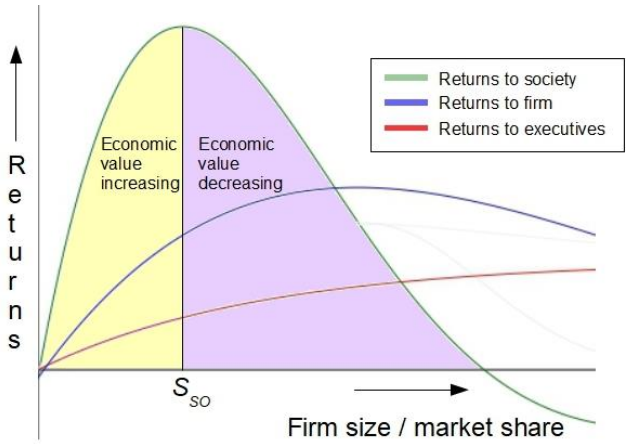
But this is different in concentrated markets, as firms can use their market power to keep prices high even if a tax is removed – and thus increase their profits. While using market power to keep prices high does require firms to reduce their output (and thus pollution), this reduction is fairly small due to the low elasticity of a concentrated market, and is likely to be less than that from applying a pollution tax to a high-elasticity competitive market. And resisting the internalization of costs can pay off significantly for large firms: the global oil and gas industry, for example, is able to keep much of the approximately $152 billion in costs they externalize (2012 numbers, as calculated by the consulting firm TruCost in concert with KPMG and the Erb Institute at the University of Michigan), or about 23 percent of sector earnings[20].

HOW REDUCING COMPETITION INCREASES PROFITS AT THE EXPENSE OF SOCIETY

As we saw earlier, our industries have been growing more and more concentrated over the last few decades, leaving us with a lot of concentrated markets. Four airlines serve 80% of all passengers[21]; banking is concentrated into just four large banks, and insurance is dominated by five major companies; 10 companies control almost every food and beverage brand in the world[22]; and more examples abound.

A key reason for this increasing concentration is that firms often have, and executives always have, *incentives to increase their market* share beyond the level that optimizes societal benefit, S_{SO}, illustrated in Figure 1. Firms see their monopsony and monopoly power (i.e. their ability to raise prices above, or push wages below, competitive-market rates) increase continuously with scale, and in some industries that pricing power can continue to exceed the various costs (often management costs) that increase with scale. Also, research shows a strong correlation between firm size and chief executive compensation[23] , a relationship which gives corporate executives a personal incentive to increase corporate size beyond what is best not only for society overall, but at times, also beyond what is best for their firm.

Figure 1: Returns to Scale



Firms that have exhausted their economies of scale, or the terms of their patent, can increase their profits still further, but here they must turn to reducing the competitiveness of their market, thus increasing the amount of market power they are able to exert. They can hinder competition in three ways: firms increase market share beyond S_{SO}, often through mergers and acquisitions; they erect barriers to entry, such as the "patent evergreening" techniques common in the pharmaceutical industry; and firms use misleading information about product utility, quality and safety.

Increasing Scale Beyond S_{SO}

Mergers in a highly competitive market only slightly reduce the number of vendors, and may perform useful roles. In concentrated markets, however, they naturally have a more severe effect on competition. Because we have seen high – and increasing – rates of M&A activity since the 1980's[24], we now have a lot of concentrated markets, as we have seen.

Such high levels of concentration mean that M&A activity is likely to decrease competition, instead of producing increased efficiencies, and increase profits at the expense of total surplus. Recent studies show this effect: one team of economists found that M&A in already concentrated industries increased profit margins, but did not increase operational efficiency[25]; another team examined mergers across all U.S. manufacturing industries between 1997 and 2007, and found the same effect: mergers increased profits between 15% and 50%, but had no statistically significant average effect on productivity.[26] Other studies have reached similar conclusions[27].

The hospital industry provides a telling example. Because health care services are so critical to consumers, price elasticity is especially low, making these markets particularly exploitable, and particularly profitable to exploit. Further, insurance plays a dominant role in payment for services, and thus renders the industry a poor fit for market solutions in the first place: insurance, while critically important, strongly distorts the price-demand signal that is fundamental to market functioning (because the person demanding the service is only paying a fraction of the cost).

Hospitals intrinsically have a degree of market power due to the economies of scale involved with the care they provide, but can increase it significantly through mergers and acquisitions, and they have been doing so at a brisk pace since the 1990's. Studies of these mergers show mixed results regarding their impact on quality of care, averaging slightly negative, but consistently show that these mergers result in increased prices[28], and that the amount of the increase depends on how much the merger is increasing concentration. One study reviewed the 366 hospital mergers that took place between 2007 and 2011, and found that post-merger prices went up over 6% when the merging hospitals are geographically close (less than 5 miles apart), while mergers between hospitals 25 miles or further apart produced no significant price effect[29]; another study found that mergers between hospitals located very close to each other (less than 0.3 mile apart) resulted in price increases greater than 40%.[30]

Between these concentration effects in hospitals, related ones in physician practices[31], and the high markups already discussed in the branded pharmaceutical industry, health care prices are significantly above normal margins. Princeton economists Anne Case and Angus Deaton estimate this amounts to an annual "poll tax" of $8,000 for each of the 127 million families in the U.S.[32]

Excessive scale is also used in low-elasticity labor markets to achieve a similar effect, increased profits from suppressed wages. Low-wage workers tend to have the smallest supply elasticity[33], meaning employers can push wages further below their competitive rates than they can otherwise. These industries – dominated by food service and retail trade – have also become quite concentrated, with the top 5 vendors in each controlling about half the market. I explore this issue in more depth in *Working Poverty: Low Skills or Low Wages?*[34], and find that these workers' wages are roughly 25% less (about $4,500 less for a typical worker) than they would be in highly competitive markets.

Barriers to Entry

Barriers to firm entry into a market are a key reason that some markets are non-competitive, as they hold at bay the very force (competition) that maximizes the efficiency of markets. Some of these barriers arise as an intrinsic result of economies of scale, from possessing a process superiority over competitors, or from the government-provided monopoly of a patent, the three potentially virtuous (i.e. maximize societal benefit) means of acquiring scale discussed earlier.

Some barriers arise through differences in access to finance between incumbent firms (easier access) and potential new entrants (harder access), and that difference is exacerbated by both the concentration of the banking industry itself[35], which is more concentrated than at anytime in the past two decades, and the low interest rates we have had for that same period of time[36].

But some barriers to entry are erected solely for the purpose of reducing competition. The branded pharmaceuticals industry is notable for its efforts to extend their patents many years beyond their original expiration. Some forms of this "patent evergreening" include: the "closed distribution" technique, where the manufacturer refuses to distribute to generic manufacturers, who require enough samples of the original drug to prove theirs is equivalent[37]; "patent thickets", in which the manufacturer files lots of additional patents (often dozens or more) to impede the ability of a generic rival to begin production[38]; "product hopping", where a branded manufacturer patents a minor variation of a drug whose patent will soon expire, and then heavily markets the new version to physicians; abuse of REMS

and "orphan" drug regulations; even illegal "pay for delay" schemes, in which the branded manufacturer pays a generic manufacturer to delay production[39].

Generic pharmaceutical manufacturers are being accused of their own barriers to entry: forty-four states are suing 20 large generic drug companies over an alleged price-fixing conspiracy, accusing them of colluding to divide up the market and keep competition low[40]. This is not hard to believe when we see how concentrated that industry is: markets for specific drugs mostly have concentration values (HHI) over 5,000[41] (whereas competitive markets have HHI values under 1500), the median number of manufacturers of a generic is just two[42], and forty percent of these markets are supplied by only one manufacturer. When you consider that prices with just one generic manufacturer are, on average, three times the prices obtained with four manufacturers[43], this makes numerous generic drugs considerably more expensive than what competitive markets would produce.

Another example is the barriers fast food firms have set to limit employees' ability to find more competitive work. A recent study from Princeton and the National Bureau of Economic Research found that 58% of major franchisor contracts include "no poaching of workers" clauses[44], which dramatically reduces employees' ability to bargain for higher wages.

Incomplete or Misleading Information

Information (e.g. information on pricing, quality, usefulness) is our final major axis of market competitiveness, playing two key roles: first, factual product or service information in consumers' hands heightens market competitiveness, enabling consumers to most rationally select; and second, incomplete or intentionally misleading information can be strategically utilized by firms to create perceived but inaccurate product differentiation, or to artificially increase demand, both of which increase profits at the expense of market competitiveness.

Lack of information can mask product quality issues, costing the consumer more in the long run than understood at time of purchase, and costing the environment more than a highly competitive market with full information would, as more products end up in landfills. Lack of pricing transparency can lead to artificially high demand for products and services, such as the hidden fees often charged in certain financial products[45]. Misleading nutrition information artificially increases demand for less healthy products, and may result in health problems like increased levels of obesity[46], especially with children.[47] Children are particularly vulnerable to advertising, and some innovative executives have discovered that they can increase sales 20-40% if they can prompt children to nag their parents for the product.[48]

Industries and firms also use misinformation to play down the harm from a product. Scholars have chronicled some key techniques employed in these campaigns: the use of fake experts (people who are experts in a different field), logical fallacies and cherry picking of data to sow doubt about the actual scientific evidence linking product use to its harmful effects[49]. The sugar industry, for example, sponsored research programs in the 1960's and 1970's that successfully cast doubt on the hazards of sugar (though early indications of its role in coronary heart disease had emerged in the 1950's), directing blame toward fats and cholesterol instead.[50]

In the short term, the goal of such campaigns is to *prop up demand*, as we see in the pioneering example of the tobacco industry.[51] The medium-term goal of campaigns that follow the "Big Tobacco Strategy",

as detailed in Oreskes' and Conway's impressive book *Merchants of Doubt*[52], is to *forestall demand for regulation* by undermining public support for a conclusion the industry itself, in many cases, has already come to[53]. The fossil fuel industries and their climate change denial campaign are prime examples: despite knowing, as early as the 1970's, that burning fossil fuels causes global warming (as revealed by internal documents[54]), the industry embarked on a multi-decade disinformation campaign designed to sow doubt about the strong scientific consensus on exactly this fact (over 90% consensus among climate scientists). Scholars have detailed the network of groups involved in these campaigns: generally initiated by the affected industry, as is the case with climate change denial, they also include industry organizations, conservative foundations and think tanks, front groups, and the "echo chamber" between the media and politicians[55].

The longer term goal of many of these "Big Tobacco Strategy" campaigns is to *forestall all regulation of big business by promoting "free markets".* Oreskes and Conway found that this was an element in all of the campaigns they examined, whether they were campaigns to minimize the perceived harm of smoking tobacco, of fossil fuel emissions, or others. Other historians and scholars have also documented this[56] , showing how "[t]he rise of corporate propaganda since the 1970s has been particularly aimed at selling the idea of free, unregulated business enterprise and an accompanying policy agenda…."[57]. The US Advertising Council launched such a campaign in 1976, and these efforts, along with similar expenditures from other parts of the business community, were stunningly successful: the percentage of Americans believing that there was "too much regulation" of business soared from 22% in 1975 to 60% by 1980[58].

CONCLUSIONS

> *Today's markets are characterized by the persistence of high monopoly profits. The implications of this are profound.* – Joseph Stiglitz[59], 2016

We have seen that the free-market and the socialist perspectives on the economy only represent points at opposite ends of what is in reality a spectrum of market competitiveness and appropriate scale, and that each is only useful in certain very limited cases. Already-competitive markets (e.g. commodities) with low to no barriers to entry require little regulation, while certain essential goods markets (such as water, electricity, and possibly health care) require significant regulation and perhaps even public ownership. But whereas serious consideration of quasi-socialist solutions is mostly limited to essential goods (e.g. Medicare for All), the free-market perspective has influenced policy in almost every sector of the economy, allowing the supranormal profits and the concomitant societal harms that we have examined earlier.

A major reason for this has been the "free market" information campaigns we discussed at the end of the last section, driven by the connection between less regulation and more profits, and continuing – very successfully – since the 1970's. Surveys from the Pew Research Center show that, globally, 66% of people believe that "most people are better off in a free market economy," and that 70% of people in the U.S. agree[60]. "Free markets" are also core to the economic platform of one of the U.S.' two major political parties[61].

But this framing leads us astray in three critical ways. First, it tacitly assumes all markets are competitive, thus requiring little regulation, but we have seen how inaccurate this is. Second, the "free market" approach also assumes that markets will self-correct when concentration increases. And while markets that are already highly competitive, with low barriers to entry, may be able to self-correct, concentrated markets do the opposite – they tend toward further concentration more strongly than they do toward competition and efficiency[62]. This is due to barriers to entry that are natural to firms at virtuous scale, as well as to the mechanisms for reducing competition that we saw in our examples earlier, like erected barriers to entry and M&A activity. Because reducing market competitiveness increases firm profits, some of these mechanisms feed back on themselves and create vicious cycles: profits from "killer acquisitions"[63] can be used for more M&A, and since access to finance is easier for large firms than for small ones, this cycle escalates; increased margins from market power shift investment to high market power firms, leaving less for smaller firms (as Warren Buffett has said of his investment strategy, "the single most important decision in evaluating a business is pricing power"[64]). And deregulation of protections against market power lead to increased market power and increased profits, which enable more lobbying efforts, which deregulate the economy further.

The third weakness of the "free markets" goal – and the weakness that most pertains to setting policy – is that it leads us to believe that all markets respond to regulation the way highly competitive markets do, whereas in reality, concentrated markets respond to regulation very differently. Raising the minimum wage in a concentrated market *maintains or increases employment,* both theoretically[65] and in practice[66]. Removing collusive market division agreements (e.g. generic pharmaceuticals) reduces prices, and increases output, as will ending "patent evergreening" in branded pharmaceuticals. Enforcing antitrust law to keep scale close to the societal optimum S_{SO} will make product and labor (and supplier) markets more competitive, bringing prices and wages closer to their competitive-market rates, and increasing total output and economic growth. Ensuring that the cost of pollution is internalized improves local and global health while maintaining jobs. Thus, appropriate regulation in concentrated markets restores competitive-market conditions, returning "surplus" that firms have annexed to the consumers or workers it belongs to, while also "expanding the pie."

What this means, at the same time, is that all of the corrections we have identified above come only at the cost of large business' *supranormal profits.* The profits earned from investing in economies of scale, or from product or process innovation are retained; it is the profits from reducing competition that decrease with these corrections. Corporate profits are, after all, considerably higher now than they've ever been: total profits after tax in 2019 are 85% higher than in 1997 when adjusted for inflation, and the ratio of corporate profits to GDP in the 2010's averages 50% higher than in 1997, a year when consumer sentiment about the economy was particularly high[67].

Overall, we have seen that a pro-competition agenda can be pro-growth while simultaneously ameliorating some of our most vexing social issues. Keeping commodity markets competitive, keeping industries with economies of scale close to optimal scale, minimizing abuses of patent protection – all promote a more healthy economy, where gains are distributed more fairly, and profits come not from market power, but from more efficiently organizing production, or from creating new and better products and services. And all of these benefits increase from a strong dose of competition.

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