Monopolies Are Distorting the Stock Market

Executive Summary
While Big Tech is drawing fire for monopolistic practices, industry concentration has actually been increasing more broadly since the 1980s. Most industries are now dominated by a few superstar firms. These firms enjoy higher profits and pay less to labor. The rise of monopolies explains currently elevated corporate profits and stock market prices. However, it also contributes to rising inequality and political unrest.

Digital Monopolies

Big Tech Ballin’
In our last paper, we used machine learning to isolate the excellent performance of disruptive technology companies. However, no fancy tools would have been necessary if investors had simply bought the Big Tech household names (Facebook, Amazon, Apple, Google, Microsoft).

Over the past decade, Big Tech compounded at +28% per year. While these returns would not be so shocking for a microcap stock, Big Tech performed this feat on an unprecedented scale. Apple alone went from a $250 billion to a $2.2 trillion company. These five firms now have a combined market capitalization of $7.3 trillion!

Since stock market indices generally weigh constituents in proportion to their market cap, Big Tech is a huge part of our portfolios. Its share of the S&P 500 has climbed to around 22%. This exceeds the combined weight of all companies in the materials, energy, real estate, utilities, and consumer staples sectors. Investment banks could replace their energy analysts with Google analysts and retain the same coverage!

In terms of names, these five companies have as much weight as the bottom 359 companies in the S&P 500 and the bottom 2476 companies in the Russell 3000.

In general, extreme concentration reduces the diversification benefit of investing in an index. However, so far this year, Big Tech has bailed investors out in an otherwise challenging market. The S&P 500 is up 7% but would actually be down without Big Tech. The Big Five carried the market with the other 495 companies watching from the bench.

Occupy Silicon Valley
However, many people have begun to ask an important question: is the extraordinary success of Big Tech in spite of their size or because of their size?

On July 29, 2020, Congress held an antitrust hearing with the CEOs of Facebook, Apple, Amazon, and Google. Lawmakers from both sides of the aisle accused Big Tech of abusing its market power. The 5.5-hour hearing is best summarized by the subcommittee chair’s closing statement:

“These companies, as exist today, have monopoly power. Some need to be broken up. All need to be properly regulated and held accountable. We need to ensure the antitrust laws, first written more than a century ago, work in the digital age. When these laws were written, monopolists were men named Rockefeller and Carnegie. Their control of the marketplace allowed them to do whatever it took to crush independent businesses and expand their own power. Well, the names have changed, but the story is the same.”
Regardless of whether you believe they abuse it, we can all agree that Big Tech has accumulated extreme power. As consumers, they control the apps on our smartphones, the results of our web searches, and the content of our news feeds. As businesses, they run our cloud servers and control our access to customers via their dominance of digital advertising and e-commerce marketplaces.

Exhibit 2
Big Tech Monopolies

<table>
<thead>
<tr>
<th>Product</th>
<th>Market Share</th>
<th>Market Leaders</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mobile App Stores</td>
<td>100</td>
<td>Apple, Google</td>
</tr>
<tr>
<td>Mobile Operating Systems</td>
<td>99</td>
<td>Google, Apple</td>
</tr>
<tr>
<td>Search Engines</td>
<td>97</td>
<td>Google, Microsoft</td>
</tr>
<tr>
<td>Web Browsers</td>
<td>94</td>
<td>Google, Microsoft, Mozilla, Apple</td>
</tr>
<tr>
<td>Search Advertising</td>
<td>92</td>
<td>Google, Amazon, Microsoft</td>
</tr>
<tr>
<td>Cloud Computing</td>
<td>75</td>
<td>Amazon, Microsoft, Alibaba, Google</td>
</tr>
<tr>
<td>e-Books</td>
<td>75</td>
<td>Amazon</td>
</tr>
<tr>
<td>Social Networking</td>
<td>73</td>
<td>Facebook, Google, Tencent</td>
</tr>
<tr>
<td>E-Commerce</td>
<td>56</td>
<td>Amazon, eBay</td>
</tr>
</tbody>
</table>

Source: Open Markets Institute, IBISWorld, eMarketer, Net Market Share, Kinsta, Fool, Sparkline

Each of these critical markets is controlled by a subset of one or two of the Big Tech firms. These markets are basically monopolies (okay, I know the term is technically oligopoly).

Shots have been fired. We are in the midst of a battle for the Big Tech narrative. Will history view them as the benevolent geniuses that improved our lives through innovation or as the evil tech overlords that broke capitalism?

Monopolies Everywhere

The Illusion of Choice

While Big Tech is making headlines, it turns out that almost all industries are now dominated by monopolies. Capitalism has blessed us with Big Oil, Big Tobacco, Big Pharma, Big Ag, and even Big Beer. Almost every industry is now dominated by a few big firms.

Interestingly, you do not see this effect if you simply compute concentration ratios (e.g., Herfindahl-Hirschman Index) at the market or sector level. However, as you zoom in to more granular product markets, the effect comes into sharp focus.

These days, consumers generally have a plethora of choices. However, in many cases, every product in a category is made by the same few companies. For example, while there are thousands of beer brands, three companies are responsible for 75% of beer sales. AB Inbev alone owns 500 brands, including Budweiser, Stella, and Corona. Cheers! 🍺

Exhibit 3
The Illusion of Choice

Source: Brewminate

Once we adjust for common brand ownership, we find that consumers generally face only a handful of companies in each product category. The table below shows examples of highly concentrated product markets. We list the top firms in
each product category along with their combined market share and, if possible, the size of the total market.

Exhibit 4
Concentrated Product Markets

<table>
<thead>
<tr>
<th>Product</th>
<th>Market Share</th>
<th>Revenue ($)</th>
<th>Market Leaders</th>
</tr>
</thead>
<tbody>
<tr>
<td>Washer &amp; Dryer Manufacturing</td>
<td>88</td>
<td>4.8</td>
<td>Whirlpool, Hotpoint, Samsung</td>
</tr>
<tr>
<td>Cell Phone Providers</td>
<td>86</td>
<td>9.6</td>
<td>Verizon, AT&amp;T, Sprint, T-Mobile</td>
</tr>
<tr>
<td>Dry Cat Food</td>
<td>97</td>
<td>1.9</td>
<td>Nestle, J.M. Smucker, Supermarket Brand, Mars</td>
</tr>
<tr>
<td>Dialysis Centers</td>
<td>92</td>
<td>24.4</td>
<td>Fresenius, Davita</td>
</tr>
<tr>
<td>Peanut Butter</td>
<td>92</td>
<td>32.2</td>
<td>Smuckers, Store Brand, Hormel, Conagra</td>
</tr>
<tr>
<td>Cigarette &amp; Tobacco Manufacturing</td>
<td>91</td>
<td>46.3</td>
<td>Altria, Reynolds American, Imperial Brands</td>
</tr>
<tr>
<td>Pacemaker Manufacturing</td>
<td>89</td>
<td>1.8</td>
<td>Medtronic, Abbott Laboratories, Boston Scientific</td>
</tr>
<tr>
<td>Baby Formula</td>
<td>89</td>
<td>2.3</td>
<td>Abbott, Redditt Benckiser, Perrigo, Nestle</td>
</tr>
<tr>
<td>Orthopedic Products Manufacturing</td>
<td>88</td>
<td>10.6</td>
<td>Stryker, Zimmer Holdings, Johnson &amp; Johnson</td>
</tr>
<tr>
<td>Home Improvement Stores</td>
<td>87</td>
<td>182.5</td>
<td>Home Depot, Lowe's, Menards</td>
</tr>
<tr>
<td>Mayonnaise</td>
<td>86</td>
<td>1.6</td>
<td>Unilever, Kraft</td>
</tr>
<tr>
<td>IV Solution</td>
<td>86</td>
<td>1.5</td>
<td>Baxter, ICU Medical, B. Braun Medical</td>
</tr>
<tr>
<td>Hearing Aid Manufacturing</td>
<td>84</td>
<td>1.5</td>
<td>William Diamant, Starkey, Sonova, Sivartos</td>
</tr>
<tr>
<td>Ambulance Manufacturing</td>
<td>80</td>
<td>0.55</td>
<td>Rev Group Inc, Braun Industries</td>
</tr>
<tr>
<td>Coffin &amp; Casket Manufacturing</td>
<td>82</td>
<td>0.55</td>
<td>Hill &amp; Brand, Matthews</td>
</tr>
<tr>
<td>PET Scanner Manufacturing</td>
<td>82</td>
<td>2.1</td>
<td>Siemens, General Electric, Philips Healthcare</td>
</tr>
<tr>
<td>Craft Stores</td>
<td>81</td>
<td>3.7</td>
<td>Michaelis, Jo-Ann, Hobby Lobby</td>
</tr>
<tr>
<td>Corn Seed</td>
<td>78</td>
<td>1.6</td>
<td>Dow Dupont, Bayer</td>
</tr>
<tr>
<td>Contact Lens Manufacturing</td>
<td>77</td>
<td>3.5</td>
<td>J&amp;J, Novartis, Cooper Companies, Bausch Health</td>
</tr>
<tr>
<td>Medical Device Manufacturing</td>
<td>77</td>
<td>39.2</td>
<td>Medtronic, General Electric, Abbott, Danaher</td>
</tr>
<tr>
<td>Domestic Airlines</td>
<td>76</td>
<td>142.3</td>
<td>Delta, American, United, Southwest</td>
</tr>
<tr>
<td>Beer</td>
<td>75</td>
<td>7.4</td>
<td>Anheuser-Busch InBev, Miller Coors, Constellation</td>
</tr>
<tr>
<td>Pharmacy Benefit Management</td>
<td>75</td>
<td>43.4</td>
<td>CVS, Express Scripts, United Health, Humans</td>
</tr>
<tr>
<td>Mobile Home Manufacturing</td>
<td>71</td>
<td>13.5</td>
<td>Berkshire Hathaway, Champion, Carver</td>
</tr>
<tr>
<td>Syringes &amp; Needles Manufacturing</td>
<td>69</td>
<td>3.8</td>
<td>Becton Dickson and Company, Medtronic</td>
</tr>
<tr>
<td>Pharmaceuticals &amp; Drug Stores</td>
<td>67</td>
<td>270.6</td>
<td>Walgreens, CVS, Rite Aid</td>
</tr>
<tr>
<td>Mattress Manufacturing</td>
<td>66</td>
<td>8.8</td>
<td>Serta Simmons, Tempur Sealy, Sleep Number</td>
</tr>
<tr>
<td>Diaper Manufacturing</td>
<td>64</td>
<td>12.6</td>
<td>Procter &amp; Gamble, Kimberly-Clark</td>
</tr>
<tr>
<td>Eye Glasses &amp; Contact Lens Stores</td>
<td>61</td>
<td>12.5</td>
<td>Luxottica, National Vision, Visionworks of America</td>
</tr>
<tr>
<td>Meat Processing</td>
<td>53</td>
<td>217.7</td>
<td>JBS SA, Tyson, Cargill, Smithfield</td>
</tr>
<tr>
<td>Car Rental</td>
<td>50</td>
<td>42.1</td>
<td>Enterprise, Hertz, Avis Budget</td>
</tr>
<tr>
<td>Pet and Pet Supply Stores</td>
<td>47</td>
<td>19.6</td>
<td>Pet Smart, Petco</td>
</tr>
</tbody>
</table>

Source: Open Markets Institute, IBISWorld, Sparkline (as of 2018)

The data are extremely striking. Many monopoly industries are familiar from our everyday lives: airlines, cigarettes, cat food, and cell phone providers. However, others fly under the radar: PET scanners, coffins, corn seed, and pacemakers. Most people probably don’t know that three companies control 75% of the $450 billion pharmacy benefit management (PBM) industry (let alone what a PBM even is).

The issue becomes even more acute if we drill down yet one layer further into product-geographic markets. While there are several cable internet companies, most households can only choose from one or two. The four major airlines have similarly carved up the United States into fiefdoms, with each airline monopolizing flights out of a given airport hub. A 2014 study found that the three largest health insurance companies control at least 80% of the market in 37 states. The list goes on, but the end effect is that competitive markets are mostly an illusion.

The Rise of Monopolies

Where did all these monopolies come from? It turns out that industrial concentration has been ascendent since the 1980s. The growth of monopoly companies started long before the founding of Facebook, Google or Amazon.

The exhibit below is adapted from Autor et al (2019), which analyzes data from the US Economic Census. They calculate the market share of the top four firms in each of 676 industries (e.g., grain and oilseed milling, furniture stores, sound recording industries). They find that the average increased by around 50% from 1980 to 2012.

For the most part, Big Tech built their empires organically. However, that is not to say they haven’t also dipped into their massive war chests to acquire competitors (Instagram) and expand into adjacent markets (Whole Foods). Over the past three decades, Big Tech made 770 acquisitions, of which 29 were worth over $1 billion.

However, many other monopolies were assembled primarily through acquisition. The past four decades have witnessed significant consolidation in industries ranging from railroads to cable to banking. This may very well be rational competitive behavior. If your major suppliers, competitors, and customers are consolidating, it helps to be big yourself. Most industries have gone from dozens of small competitors to a few giants.
The current wave of M&A activity that began in the 1980s has been a key driver of rising industrial concentration.

While the whales are busy gobbling up their smaller rivals, nobody has been restocking the pond (okay, I know that whales don’t eat fish). New business formation has been falling since 1977. Similarly, the number of publicly listed companies has been declining since the mid-1990s. The rise of monopolies has coincided with a fall in entrepreneurship.

**Economic Implications**

Recent economics research has linked industry concentration, corporate profitability and income inequality. The following papers (one, two, three, four) explain this more rigorously. However, we put together our own summary so you don’t have to wade through 300+ pages of academic journals.

**Superstar Firms**

Autor et al (2019) aptly calls these winners “superstar firms.” If we examine the characteristics of superstar firms, we find something interesting and intuitive.

First, we find that dominant firms are more profitable than their smaller competitors. This is perhaps almost true by definition, as their profitability likely contributes to their dominance.
The distribution of profitability has accordingly become extremely right skewed. There are a few “superstar firms” that are both huge and hugely profitable. And then there is the rest of the industry, who are small and barely profitable.

Second, we find that dominant firms are less reliant on labor. They need fewer employees to generate a given amount of revenue.

Given their heavy use of automation, the labor efficiency of Big Tech is even more extreme. Apple only has 0.37 employees per $1 million revenue. Using this logic, Scott Galloway estimates that Google and Facebook’s disruption of the advertising industry led to around 199,000 job losses.

In addition, Autor et al (2019) and De Loecker et al (2020) both find that superstar firms pay a smaller share of their revenue out as wages (note: big firms actually pay higher salaries in absolute, but just less as a percentage of their much greater sales).

In summary, we observe two effects:

1. Economic activity is increasingly being consolidated in a few large firms in each industry
2. Large firms are more profitable and pay a smaller share of their revenue to their workers

The upshot of these two effects is that profit margins rise and the labor share declines at the aggregate economy level. This is an important finding because it simultaneously explains two current macroeconomic puzzles.

The Profit Puzzle

The US stock market has done very well over the past few decades and now looks quite expensive. While there are many factors that potentially justify its lofty valuation, perhaps the most powerful argument is the strength of US corporate profits.

Historically, profits were reliably mean-reverting around 6% of GDP (blue). However, starting in the late-1990s, they seemingly underwent a paradigm shift (red). While they still gyrate with the business cycle, it appears to be around a significantly higher mean.

Source: BEA (retrieved from FRED, as of Q2 2020)
Said Warren Buffett to *Fortune* in 1999:

“In my opinion, you have to be wildly optimistic to believe that corporate profits as a percent of GDP can, for any sustained period, hold much above 6%. One thing keeping the percentage down will be competition, which is alive and well. In addition, there’s a public-policy point: If corporate investors, in aggregate, are going to eat an ever-growing portion of the American economic pie, some other group will have to settle for a smaller portion. That would justifiably raise political problems—and in my view a major reslicing of the pie just isn’t going to happen.”

Given profits are still elevated in 2020, it would seem that Buffett underestimated the proverbial appetite of corporate investors for American pie. But he may still be proven correct in time as political backlash seems to be gaining steam.

And this backlash could have considerable downside for investors. If profit margins were to revert to 6%, it would result in a 25% decline in earnings. In this state of the world, dimming corporate prospects would likely also cause valuations to compress, further compounding losses. Thus, the central question in asset allocation comes down to the sustainability of profit margins.

We have just demonstrated that, over the past few decades, superstar firms have captured a greater share of their respective markets. Furthermore, these winners are more profitable than the median firm in their industry. Mathematically, if higher-profit firms now have a greater weight in the aggregate, profit margins will rise.

Moreover, De Loecker et al (2020) show that the rise in profit margins is driven by the superstar firm effect, not changes in industrial composition. They write:

“The increase in markups [i.e., profit margins] occurs within all sectors, not between sectors. This is an important and unexpected discovery. Intuitively, we would expect that certain sectors, such as technology, would see a much bigger increase in the markup. But... there are no sectors that systematically have higher market power... the increase in market power occurs in all sectors and industries.”

My former boss has thought about this issue more than anyone I know. He has also concluded that monopoly power is playing a key role in propping up profit margins.

“My used to call profit margins the most dependably mean-reverting series in finance. And they were through 1997. ... In a world of reasonable competitiveness, higher margins from long-term lower rates should have been competed away. ... But they were not, and I believe it was precisely these other factors – increased monopoly, political, and brand power – that had created this new stickiness in profits that allowed these new higher margin levels to be sustained for so long.”

- Jeremy Grantham, *This Time Seems Very, Very Different*

We can now finally resolve the profit margin puzzle. Elevated profits are the distributional consequence of economic activity being allocated to superstar firms.

The Labor Puzzle

Over the same time period, the US has witnessed a decline in the share of GDP that is paid to workers. This decline is the mirror image of the rise of corporate profit margins.

Exhibit 12

*Labor vs. Capital*

![Graph showing wage and salary share against corporate profits share](source: BEA (retrieved from [FRED](https://fred.stlouisfed.org), as of Q2 2020))

We can explain this phenomenon using an identical line of reasoning. Economic activity has been reallocated from a fragmented set of firms to a few behemoths. These giants pay a smaller share of the spoils to their employees, causing the aggregate labor share of GDP to decline.
It is well established that corporate equity is overwhelmingly owned by the wealthy. In contrast, other people primarily depend on their wages for income. Thus, it follows that the reallocation of economic gains from labor to capital exacerbates inequality.

**Investment Implications**

**Buffett’s Moats**

In our [last paper](#), we mentioned that Warren Buffett, who has historically eschewed technology stocks, recently put 20% of his portfolio into Apple. In his 2018 shareholder letter, he wrote: “I didn’t go into Apple because it was a tech stock... [but] because of the value of their ecosystem and how permanent that ecosystem could be.”

The value of Apple’s “ecosystem” is evident in its ability to take a big 30% bite of App Store sales. This pricing power stems from the fact that Apple and Google together control 99% of the smartphone operating system market, leaving developers such as Epic Games no viable alternatives.

The more we have thought about it, the less we feel Buffett’s Apple investment is an outlier. In fact, it seems to be the continuation of a deliberate strategy. Warren Buffett loves companies with wide moats. And monopoly power confers a very wide moat indeed!

In 2011, Buffett testified before Congress, explaining his reason for investing in Moody’s:

“The single most important decision in evaluating a business is pricing power. If you’ve got the power to raise pricing without losing business to a competitor, you’ve got a very good business. ... If you’ve got a good enough business - if you have a monopoly newspaper, if you have a network television station ... your idiot nephew could run it.”

Moody’s is one of three credit rating agencies that together control 95% of the market. The Big Three even enjoy a regulatory advantage due to their status on the SEC’s approved list. Buffett understood this well, calling Moody’s “a natural duopoly” with “incredible pricing power” (FCIR).

In addition to Moody’s, Buffett has positions in a variety of other extremely concentrated industries. For example, he owns one of two companies that together control 92% of the kidney dialysis market. He also owns Verisign, which handles domain registrations for 80% of all websites (excluding country domains like .us). His investments in Benjamin Moore, Coca-Cola, Duracell, and Clayton Homes reflect a similar logic.

**Exhibit 13**

**Buffett’s Monopoly Companies**

<table>
<thead>
<tr>
<th>Industry</th>
<th>Buffett’s Investments</th>
<th>Market Share Industry Leaders</th>
</tr>
</thead>
<tbody>
<tr>
<td>Credit &amp; debit cards</td>
<td>Visa, Mastercard, Amex</td>
<td>99% Visa, Mastercard, American Express</td>
</tr>
<tr>
<td>Credit rating agency</td>
<td>Moody’s</td>
<td>95% S&amp;P, Moody’s, Fitch</td>
</tr>
<tr>
<td>Kidney dialysis</td>
<td>Davita</td>
<td>92% Fresenius, Davita</td>
</tr>
<tr>
<td>Rail transportation</td>
<td>BNSF Railway</td>
<td>87% BNSP, Union Pacific, CSX, Norfolk Southern</td>
</tr>
<tr>
<td>Paint</td>
<td>Benjamin Moore</td>
<td>84% Sherwin-Williams, Benjamin Moore, Behr</td>
</tr>
<tr>
<td>Courier</td>
<td>UPS</td>
<td>82% UPS, FedEx</td>
</tr>
<tr>
<td>Domain names</td>
<td>Verisign</td>
<td>80% Verisign</td>
</tr>
<tr>
<td>Domestic airlines</td>
<td>DAL, AAL, UAL, LUV</td>
<td>80% Delta, American, United, Southwest</td>
</tr>
<tr>
<td>Batteries</td>
<td>Duracell</td>
<td>75% Duracell, Energizer</td>
</tr>
<tr>
<td>Mobile homes</td>
<td>Clayton Homes</td>
<td>71% Clayton Homes, Champion, Cavo</td>
</tr>
<tr>
<td>Gold &amp; silver mining</td>
<td>Barrick Gold</td>
<td>66% Newmont, Gold, AngloGold, Kinross</td>
</tr>
<tr>
<td>Soda</td>
<td>Coca-Cola</td>
<td>57% Coca-Cola, PepsiCo, Keurig Or Pepper</td>
</tr>
<tr>
<td>Commercial Banking</td>
<td>JPM, BAC, WFC, USB, BK</td>
<td>44% JPM, BAC, WFC, C, USB</td>
</tr>
</tbody>
</table>

Source: Open Markets Institute, IBISWorld, Sparkline

The best example of this strategy was his 2016 investment in the US airlines. Historically, the airlines had been notorious value destroyers. In 2008, Buffett himself joked that investors would be better off if a “farsighted capitalist had been present at Kitty Hawk [and shot] Orville down.”

However, over the next several years, the airlines underwent a series of mergers. By 2016, the big four airlines had 80% of the domestic market. In response, Buffett took a 10% stake in all four companies. The bet was not on any individual airline but on the industry gaining pricing power after consolidation. And he was right!

**Exhibit 14**

**Airline Consolidations**

Source: Buzzfeed
Buy the Freaking Moat

It turns out that Buffett’s airline trade would have worked out quite well if applied systematically over the past couple decades. We created a simple rule that buys companies in industries with increasing concentration. This strategy would have outperformed the market by 2.2% per year (note: this is a backtest and does not include trading costs).

Exhibit 15

Moat Strategy Returns

The key to this strategy is that it focuses on change and not level. Stocks in concentrated industries trade at higher multiples as the market is smart enough to recognize their monopoly power. Therefore, an investment strategy that simply buys companies in concentrated industries does not outperform. However, the market does seem to be slow to recognize the pricing power conferred by rising industry concentration.

Other Investment Implications

The overall story of a world gradually converging into a few mega-corporations has many other potential investment implications. At Sparkline, we are actively exploring some of these themes. Here are a couple to chew on:

1. Small- vs. Large-Cap Stocks: The small-cap premium is a popular quantitative style factor. However, small caps haven’t delivered consistent returns since the early 1980s. We note that monopoly power and size are not perfectly correlated. For example, Alaska Airlines is a $5 billion company but only has a 6.3% market share. That being said, it seems possible that the rise of monopolies over the same period as the size factor’s demise is more than a coincidence.

2. Value vs. Growth Stocks: As we discussed last month, the value factor is in the midst of a 13-year drawdown. We found that the market assigns a higher valuation to companies in concentrated industries. In other words, the market expects that monopoly industries will manage to sustain their higher profit margins. Thus, it is plausible that value’s drawdown can be reframed as due to an implicit (and incorrect) bet against the persistence of monopolies.

The Narrative Struggle

While the rise of monopolies is an empirical fact, the explanation for this phenomenon is not well established. Many insightful economics, legal, and political pundits have weighed in. Their arguments can broadly be categorized into two competing narratives:

1. Natural Monopoly: Big companies are the natural outgrowth of economies of scale, globalization and technology. These companies have fairly earned their monopoly statuses and their scale is efficient.

2. Coercive Monopoly: Monopolists have used regulatory capture and anti-competitive practices to corrupt the capitalist system. They extract rents, fuel inequality, and stifle innovation.

Natural Monopoly

This narrative rests on the idea that we are increasingly living in a world of scale. In both the physical and digital realms, bigger is better. Giant factory farms and Gigafactories can produce corn and batteries at lower per unit costs. Merchants reach more potential customers by listing their product on Amazon than its smaller competitors.

Since the 1980s, the megatrends of globalization and technology have fueled the rise of scale.

Globalization has led to the opening up of local markets. This has greatly increased the “winner-take-all” nature of the economy. Consider a world of hundreds of independent towns. Each town has its own grocer, musician, and factory with a captive market. Now imagine we connect all these
little towns. The players will now compete over much higher stakes. Many will go out of business but the few that remain will be the next Walmart, Taylor Swift and Foxconn.

The current wave of globalization began in the 1970s and accelerated with the opening of China. As markets opened up, companies consolidated in order to achieve the efficiencies required to compete on a global scale. Conversely, firm growth may just be the happy result of successfully leveraging one’s expertise (e.g., design, manufacturing, branding) across much bigger global markets.

Economies of scale have become even more prevalent in the information age. Technological economics are often characterized by high upfront costs and a nearly zero marginal cost of production. It costs Microsoft nothing to produce an additional unit of Excel as all the R&D was paid upfront. As Brad DeLong and Larry Summers (2001) explain:

“An industry with high fixed costs and near-zero variable costs has another important characteristic: it tends to monopoly. The rule of thumb in high technology has been that the market leader makes a fortune, the first runner-up breaks even, and everyone else goes bankrupt rapidly. ... [C]ompetition in already established markets with high fixed and low variable costs is nearly impossible to sustain.”

Technology and globalization have also enhanced the power of network effects. If the value of a company’s product depends on obtaining a critical mass of users, once it has paid the requisite customer acquisition costs, it has a nearly insurmountable moat. While social networks and tech marketplaces are the canonical examples, network effects exist in all industries. For example, traders go to the New York Stock Exchange due to the liquidity it has from the millions of other traders using it.

Due to network effects and high fixed to variable costs, the argument is that it makes more sense to have just a few giant social networks, e-commerce sites, and financial exchanges. This allows society to maximize the value of economies of scale, which ideally can then be spread across the various stakeholders. Fragmentation, in contrast, would be inefficient.

This narrative views concentration as the inevitable byproduct of economies of scale, globalization, technology and network effects. Importantly, it does not view the success of Big Tech and other monopolies as resulting from unfair competitive practices. Furthermore, it views their continued dominance as the desired social and economic outcome. In other words, Mark Zuckerberg may be a dictator - but he is a benevolent one.

**Coercive Monopoly**

The competing narrative paints monopolists as corrupt robber barons emblematic of late-stage capitalist decay. In this view, these firms engage in anti-competitive behavior, exacerbate inequality, and abuse their political influence to extract monopoly rents.

First, they argue that monopolists use their power to stifle competition. For example, in the Big Tech hearing, Amazon was accused of using predatory pricing to crush its smaller rival, diapers.com. Amazon allegedly priced their diapers at a loss to force diapers.com to sell themselves to Amazon on the cheap. An earlier example is Microsoft using its operating system monopoly to coerce users to use its own browser over that of its rival Netscape (bundling).

Second, industry concentration results in lower wages and higher inequality. We already showed that superstar firms have fewer workers and a lower labor share of revenue. The cynical view is that this is due not to efficiencies but to the unfair negotiating power firms possess when they are one of the only employers in one’s profession (and commuting radius). Especially given the decline of unions, when big companies face fragmented labor markets, they tend to emerge victorious. Azar et al (2019) estimates that increased labor market concentration results in a 17% fall in wages.

Third, large incumbents may use their influence with regulators to erect barriers in order to prevent new firms from entering their industry. Increasing the burden of regulatory compliance makes it more difficult for smaller firms without armies of lawyers. This so-called “regulatory capture” can be accomplished through a combination of lobbying and the revolving door.

George Mason University’s RegData database uses simple natural language processing techniques to quantify the growth in regulatory restrictions. In particular, they look for mentions of the words “shall”, “must”, “may not”, “prohibited”, and “required” in the Code of Federal
Regulations. The RegData index has increased 2.6 times from 1970 to 2019. That’s a lot of red tape!

Exhibit 16
RegData Regulation Index

![graph showing the increase in regulations from 1970 to 2019](Image)

Source: QuantGov, Sparkline

Studies have shown that highly regulated industries have fewer new entrants and slower employment growth in small firms. In turn, this lower competition means that the incumbents in highly regulated industries enjoy higher profit margins and valuations.

In summary, this narrative attributes monopolists’ moats to unfair play: crushing competitors, squeezing workers, and corrupting regulators (h/t Jonathan Tepper).

(Anti-)Trust Falls

The Federal Trade Commission and Department of Justice are responsible for enforcing US antitrust law. The FTC was established in 1914 in response to the trusts of the Gilded Age. It is responsible for “promoting a marketplace free from anticompetitive mergers, business practices, or public policy outcomes.”

However, these agencies have become much more laissez faire since the 1980s. This was largely due to a philosophical shift championed by Robert Bork, which narrowed the definition of antitrust to “consumer welfare”. On this metric, for instance, as long as Amazon or Apple are able to improve the customer experience (i.e., lower prices, higher quality, more choices), they get a free pass.

The antitrust enforcement agencies are an important potential weapon for those who seek to reverse the rise of monopolies. Thus, it is unsurprising that Big Tech’s critics have argued that the agencies need to update their framework for the unique features of digital monopolies.

The Rise of Populism

The rise of globalization, technology and monopoly has been accompanied by a fourth trend: the rise of populism.

In the political discourse, the rise of corporate monopolies is associated with many of today’s perceived ills. Populist movements on both the right and the left have cropped up to rail against regulatory corruption, inequality, Big Tech, and globalization.

As Buffett said earlier, the inequality caused by corporations grabbing a bigger share of the pie from labor is “justifiably rais[ing] political problems.” Similarly, Ray Dalio has written that the rising tide of populism will play a powerful role in shaping economic policy.

Of course, politicians tend to overpromise and underdeliver. In 2016, Donald Trump was elected on the back of a populist, anti-establishment campaign. He even explicitly called out the proposed AT&T-Time Warner and completed Comcast-NBC mergers as “too much concentration of power
in the hands of too few.” However, since being elected, he has not followed through on his threats. Case in point - the AT&T-Time Warner merger was approved in 2018.

Elevated corporate profits have been great for investors, but there is considerable downside risk if they mean revert. Therefore, investors must pay close attention to the shifting political winds, especially given the upcoming election.

Conclusion

Since the 1980s, industrial concentration has experienced a dramatic rise. While Big Tech is the most extreme example, this effect has occurred across all industries. Most industries are now dominated by a few superstar firms. These firms capture a larger share of economic activity and pay a smaller portion to workers. This reallocation has contributed to elevated profit margins and depressed labor share.

Explaining the rise of monopolies is contentious. One side views their rise as the natural outgrowth of economies of scale, globalization and technology, while the other focuses on unfair competition, labor practices and regulatory capture. The importance of monopolies in sustaining high corporate profits and hence stock market prices means investors should pay careful attention to emerging populist political movements.

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