Stocking Up on Wealth … Concentration

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Abstract

It turns out that like the rest of us, billionaires experience wealth inequality. (Individuals who top the Forbes billionaire list are far richer than those at the bottom of the list.) Interestingly, this billionaire wealth concentration fluctuates over time … in tight correlation with the movement of the stock market. Why? A plausible reason — explored here — is that stock indexes like the S&P 500 are unwitting indicators of corporate concentration. And corporate concentration, in turn, seems to drive the concentration of individual wealth.

Studying the rich

There's an old joke that economics is too important to be left to economists. In the same vein, I think rich people are too important to be left to the self-help industry.

Yes, the popular appeal of you-can-get-rich-too books is obvious. But what's not obvious is why so few social scientists study wealth. Clearly, the public thirsts for serious inquiries about the rich. (Thomas Piketty's 2014 opus on inequality was a bestseller.) But for the most part, social scientists are content to focus on 'poverty' and let the self-help gurus wax about 'wealth'.

The irony, in my view, is that poverty and wealth are two sides of the same coin. Concentrated wealth begets concentrated poverty. Still, there is an asymmetry between the two extremes. As a rule, poor people have little power, which means they cannot be blamed for their own poverty. But almost by definition, the rich wield power to their own benefit, which means they create the conditions of their own opulence … and everyone else's misery.

Given their power over society, I find myself on a research kick studying rich people (Fix, 2023a, 2023b, 2023c; Fix & Cochrane, 2023). This article concludes the binge with a look at what drives wealth concentration among the richest Americans. I find that there's a straight line between wealth concentration, corporate consolidation, and the strategy of 'buying, not building'. In short, Peter Thiel is correct when he says that "competition is for losers" (2014).

A neoliberal experiment

Speaking of competition and losers, Ronald Reagan set the tone of the neoliberal era when, in 1981, he fired 11,000 striking air-traffic controllers (Houlihan, 2021). The message? Workers were losers who would be subjected to the discipline of competition. Reagan called it 'morning in America'. But really, it was 'morning for American big business'.

Today, we are well into the next-day's hangover, and we know how the party played out. For workers, it was a disaster. But for the rich, it was an incredible boon. Wealth didn't trickle down so much as it got catapulted up. The result, as Figure 1A shows, was a relentless rise in the concentration of American wealth.

Figure 1: A neoliberal experiment — rising wealth concentration among Americans, and American elites.
The top panel shows the Gini index of wealth concentration among all Americans. The bottom panel shows the concentration of wealth among the 400 richest Americans. (For more details, see the Appendix.)

A. Wealth concentration in the United States

B. Wealth concentration among the Forbes 400
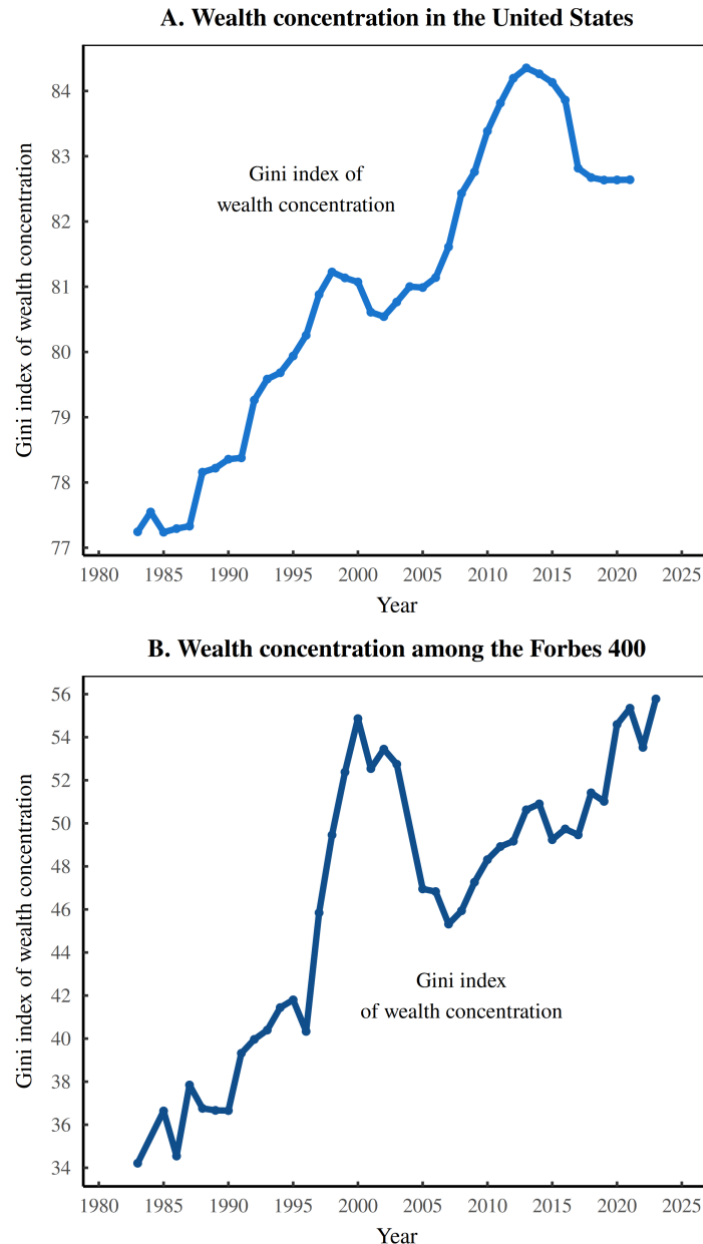
Interestingly, as wealth got catapulted from the poor to the rich, it also got transported from the mega rich to the supremely rich. This is the story told by Figure 1B. Here, I've focused on the richest Americans — the folks who grace the Forbes 400 list. Even here, among the upper crust of elites, wealth has grown more concentrated. Why?

As you'll see, the culprit seems to be the stock market. But before we interrogate our suspect, let's have a quick look at the brethren of the American rich — the globetrotting, jet-fuel belching species otherwise known as Earth's billionaires.

A billionaire hammer

They say that when you've got a hammer, everything looks like a nail. Lately my hammer has been data from Forbes.

Backing up a bit, the reason I'm holding a Forbes hammer is that since late 2021, I've been scraping Forbes' global billionaire data. The endeavor started with an email from my colleague DT Cochrane, who pointed out the value of having a daily snapshot of billionaires' wealth. I concurred, and set some billionaire-scraping code in motion. The result is that today, I have just over two years' worth of daily data about the wealth of the world's billionaires.

Billionaires. The word itself evokes a kind of class coherence. But the reality is that billionaires are a deceptively unequal group. For example, the world's billionaires have a median wealth of about $2.4 billion. And to most people, that seems like a tremendous fortune. But compared to the *$240B* wealth of the world's richest man, Elon Musk, $2.4B is chump change. Recently, Musk spent 16 times more than that just to buy a social-media company and set it in fire.

The message is that billionaire wealth is both spectacularly large and spectacularly concentrated. And as it turns out, this concentration varies with a coherent pattern. Figure 2 shows the picture over the last two years. Something is driving billionaire wealth concentration up and down. What could it be?

Figure 2: Wealth concentration among the world's billionaires.
The blue curve shows the Gini index of wealth concentration among the world's billionaires, measured daily since late 2021. Data is from the Forbes real-time billionaires list. (For more details, see the Appendix.)
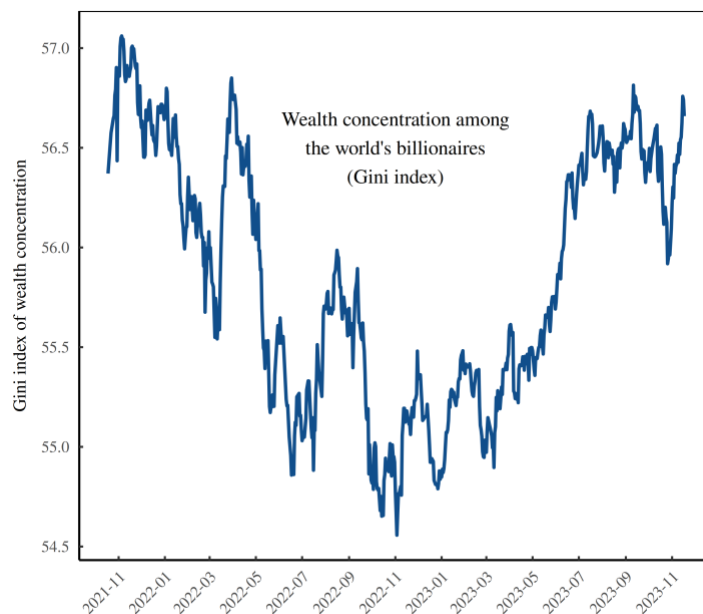
The stock market confesses

The physicist Richard Feynman claimed to dislike reading scientific papers because, as his biographer James Gleick put it, "every arriving paper was like a detective novel with the last chapter printed first."[1] The format, Feynman complained, spoiled the fun of doing detective work.

With apologies to detectives like Feynman, I'm about to spoil the fun. When it comes to wealth concentration among billionaires, the main driver appears to be the *stock market*.

To be fair, the culprit was fairly obvious. Almost without exception, the richest individuals have their fortunes invested in corporate property rights — rights which are traded on the stock market.[2] So if we want to understand inequality in these investments, the stock market is the primary suspect. Still, you might be surprised by the detail of its testimony. In Figure 3, I bring the stock market in for questioning. 'What drives billionaire wealth concentration?' I ask. The stock market squeals, 'I do! I do!'

Figure 3: The stock market confesses — billionaire wealth concentration moves with the S&P 500.
The blue curve shows the Gini index of wealth inequality among the world's billionaires. The red curve shows the movement of the S&P 500 — a popular index of US corporate stocks. (For more details, see the Appendix.)

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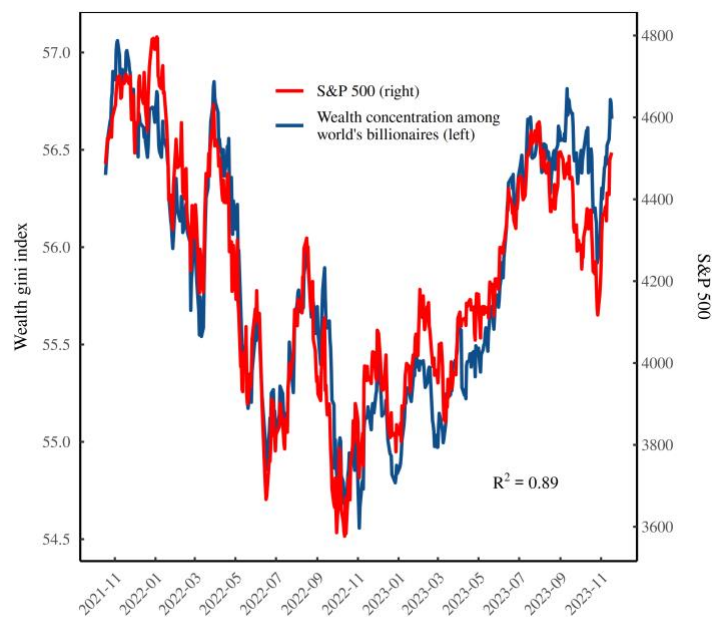
[1] Commenting on Feynman's distaste for the way scientific papers are organized, James Gleick writes:

… [Feynman] could not bear to sit down with the journals or preprints that arrived daily on his desk and piled up on his shelves and merely read them. Every arriving paper was like a detective novel with the last chapter printed first. He wanted to read just enough to understand the problem; then he wanted to solve it his own way (Gleick, 1993).

[2] True, some billionaires own private companies, so their investments are not traded on the stock market. But even then, Forbes looks to the stock market to capitalize the value of private property. (To guess the value of private businesses, Forbes takes their profit/sales and capitalizes it using the average discount rate found in the market.)

A longer track record

Looking at the confession in Figure 3, the detective in me worries that it's too good to be true. Seriously, the fit between the S&P 500 and billionaire wealth concentration is so tight that it makes me fret that I've flubbed the analysis. Fortunately, our suspect has given other confessions.

Turning to the United States, we find a similar connection between elite wealth concentration and the movement of the stock market. Figure 4 shows the record. The blue curve plots the level of wealth concentration among the Forbes 400. The red curve plots the rise of the S&P 500, measured relative to US GDP per capita. Again, it's a compelling testimony. Elite wealth concentration seems to be driven by the stock market.

Figure 4: A longer track record — the S&P 500 predicts changes in wealth concentration among the Forbes 400.
The blue curve plots the Gini index of wealth concentration among the Forbes 400. The red curve plots the rise of the S&P 500, measured relative to US nominal GDP per capita. (For more details, see the Appendix.)
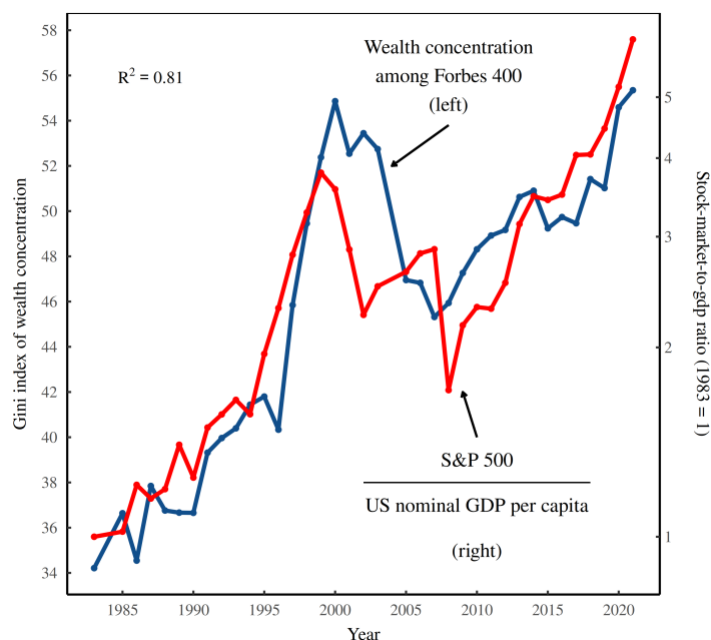
Within the confession, a (math) puzzle

At this point, it's tempting to close the case. When questioned about elite wealth concentration, the stock market confessed to the crime. And yet, if we think more deeply about the testimony, we find that it comes with a puzzle.

The mystery starts when we realize that the stock market is not one thing. It is many things — many corporate stocks that each have a mind of their own. Now, when we look at the S&P 500, we're measuring the average movement of these stocks. Fine. But the thing about *averages* is that they typically tell us nothing about measures of *spread*. Yet elite wealth concentration is definitely a measure of spread.

And so we have a mathematical puzzle. The stock-market average seems to 'know' about something that it shouldn't. Why?

Growth through inequality

To unwrap our stock-market puzzle, we need to review some math. In general, measures of spread are unrelated to measures of central tendency.[3] There is, however, an exception. It happens when *growth* is driven by *inequality*.

To illustrate this exception, we'll turn to a simple thought experiment. Imagine two people, Alice and Bob, who both have $1 in their pocket. Over time, we hand out money to the pair, thereby increasing their pool of wealth. But the catch is that we give the money exclusively to Bob.

Table 1 shows how these handouts affect Alice and Bob's average wealth, along with their wealth concentration. As we hand money to Bob, Alice and Bob's average wealth grows. But this average is driven not by shared prosperity, but by rising inequality. Importantly, in this situation of one-sided handouts, the wealth *average* becomes an (unwitting) indicator of the level of wealth *spread*.

Table 1: Growth through inequality

Year	Alice's wealth	Bob's wealth	Average wealth	Wealth concentration (Gini index)
1	$1	$1	$1	0.00
2	$1	$3	$2	0.50
3	$1	$9	$5	0.80

Note: To measure wealth concentration, I've used the sample-size adjusted Gini index. For details, see Deltas (2003).

Putting on our detective hats, it seems likely that similar behavior — what I'm calling 'growth through inequality' — explains our stock-market results. We've found that the S&P 500 index (an average) is connected to levels of elite wealth concentration (a form of spread). But this connection only makes sense if the S&P 500 is an (unwitting) indicator of stock-market inequality.

So with inequality in mind, we need to peer inside the S&P 500 to see how it gets made.

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[3] To be more technical, measures of central tendency are typically unrelated to *scale-independent* measures of spread. For example, the standard deviation is a common, scale-*dependent* measure of spread which *is* related to the mean. But the coefficient of variation (the standard deviation divided by the mean) is not related to central tendency because it is scale independent.

The Gini index is a good example of a scale-independent measure of spread. If you multiply everyone's wealth by a constant factor, it won't affect the Gini index. This is by design. But for what it's worth, some people think this design feature is a bug. For example, anthropologist Jason Hickel (2019) argues that we should use measures of inequality that are sensitive to *absolute* differences in income/wealth. I disagree, for reasons discussed in Fix (2020).

Inside the S&P 500

In simple terms, the S&P 500 tracks the *total market capitalization of the 500 largest US firms*. For the math averse, you can take this fact and skip to Figure 5. But for the equation lovers, here are the details.

The S&P 500 tracks the average stock price of five hundred of the largest US companies.[4] Importantly, S&P *weights* the average according to each company's size, measured in terms of outstanding shares. Here's the math. Let P_i be the stock price of company i. And let Q_i be the number of outstanding shares in this company. Summing over all 500 companies, the S&P 500 is then:

$$SP500 \propto \sum_i P_i \times Q_i$$

Importantly, when we multiply stock price P by the number of shares Q, we are calculating a company's *market capitalization*, K. So in simplified terms, the S&P 500 sums the market capitalization of the 500 largest US firms:

$$SP500 \propto \sum_i K_i$$

Backtracking slightly, note that I've used the '∝' symbol (which stands for 'proportional to') in the formulas above. I've used it because I'm excluding some adjustments that go into calculating the actual S&P 500 index. Since these adjustments don't affect my argument, I'm going to ignore them.[5]

Forging ahead, our equations indicate that the S&P 500 is proportional to the total market capitalization of the 500 largest US companies. On that front, the empirical evidence suggests the same thing, as shown in Figure 5.[6]

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[4] Interestingly, the selection of S&P 500 companies isn't done simply by ranking market cap and taking the top 500 companies. Instead, S&P has a committee (whose membership is kept secret) that makes arbitrary changes to the list, swapping firms at their discretion (De Silva, 2019). So why the committee approach? Perhaps because it makes S&P brass feel important, and justifies their (presumably) fat pay checks.

[5] There are two major adjustments that go into making the S&P 500 index. First, changes in the index composition are not allowed to affect the index itself. So if Company A gets added to the S&P 500 and Company B gets removed, the swap can't change the resulting index.

Second, the S&P 500 is not affected by the issuance of new stocks. So if Apple increases its market cap by selling more shares, the change won't affect the S&P 500. For more details about these adjustments, see page 7 of S&P Dow Jones (2024).

[6] More equations for the math oriented; the S&P 500 index scales with market cap according to a power law. Let K_{500} be the total capitalization of the 500 largest US firms. The S&P 500 index (from 1950 onward) is then defined by the following equation: $SP500 = 5 \cdot (K_{500})^{0.84}$. The existence of this power-law scaling is due to the adjustments that go into calculating the S&P 500.

Figure 5: The S&P 500 is an adjusted index of market capitalization.
The blue curve shows the S&P 500. The red curve plots the total market capitalization of the 500 largest publicly-traded US firms, ranked by market cap. To a first approximation, the two curves are identical, meaning the S&P 500 is an adjusted index of capitalization. (For more details, see the Appendix.)
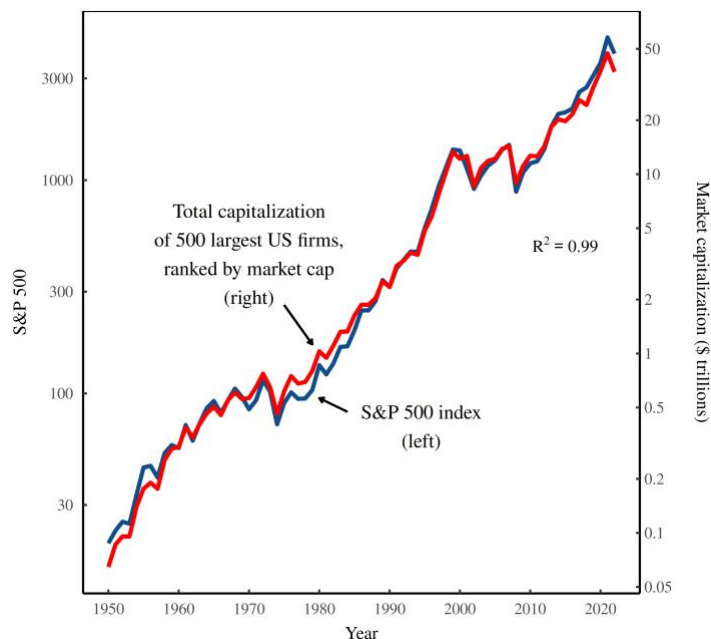

The reason I'm bothering with this stock-index math is that I want to look at the *components* of the S&P 500. We now understand that these components are basically the market capitalization of the 500 largest US firms. Let's use this knowledge to peer inside the S&P sausage.

Figure 6 shows a different view of the S&P 500. Rather than *summing* the market capitalization of our top 500 firms, I've plotted the market-cap values for *each* firm. Then I've connected the values with a pretty rainbow that shows the evolving composition of the S&P 500 index. Besides being nice eye candy, this market-cap rainbow (presumably) holds the key to understanding why the S&P 500 relates to elite wealth concentration.

Figure 6: Inside the S&P 500.
This figure shows the (approximate) components of the S&P 500 — the market capitalization of the 500 largest US corporations. Each colored line tracks a specific capitalization rank (not a specific corporation). Note that the vertical axis uses a log scale. (For more details, see the Appendix.)
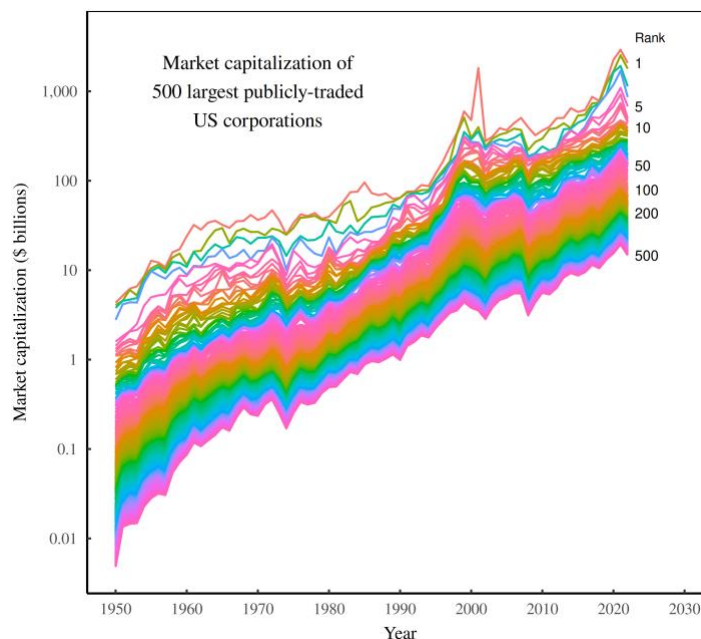
Growth through corporate concentration

Having dissected the S&P 500, we're ready to return to our original question: why does a stock-market *average* tells us about a measure of elite wealth *spread*? The answer, it turns out, is that what appears as stock-market 'growth' is in part, an artifact of rising stock-market *concentration*.

Here's how it works. Returning to our Alice-and-Bob thought experiment, we were able to increase Alice and Bob's average wealth by handing money solely to Bob. But this rising average didn't indicate shared prosperity. It was an artifact of the rich getting richer.

Turning to the stock market, the situation is similar. Except that Alice and Bob are not people, they are *firms*. The Bob-like firms are giant companies like Apple, Microsoft, Google and Amazon — four corporations that have a combined market capitalization of about $5.9 trillion. The Alice-like firms are the smaller companies on the S&P 500.

What's important is that collectively, our four Bob-like firms account for about a *sixth* of the value of the entire S&P 500. So if their stock rises, it will buoy the whole S&P 500 index. But this buoyancy isn't really 'growth'; it's an artifact of corporate concentration — rich firms getting richer.

In more general terms, when we look at the rise of the S&P 500 index, we find that it is connected to levels of corporate concentration. Figure 7 makes the case. In Figure 7A, I've plotted a measure of corporate concentration — the Gini index of market capitalization among the 500 largest US firms. When this Gini index grows, it signals that corporate wealth is being concentrated in the hands of the richest firms. Looking at Figure 7B, we see that this corporate concentration is tied to the movement of the S&P 500 (measured relative to US GDP per capita).

Figure 7: Stock-market growth through inequality.
Panel A plots the level of wealth concentration among the 500 largest publicly traded US firms — the Gini index of market capitalization. Panel B shows the movement of the S&P 500 relative to US nominal GDP per capita. The correlation between the two curves ($R^2 = 0.42$) suggest that the movement of the S&P 500 is driven in part by market concentration — rich firms getting richer. (For more details, see the Appendix.)

A. Concentration of market capitalization among the 500 largest US corporations

B. S&P 500 relative to US GDP per capita
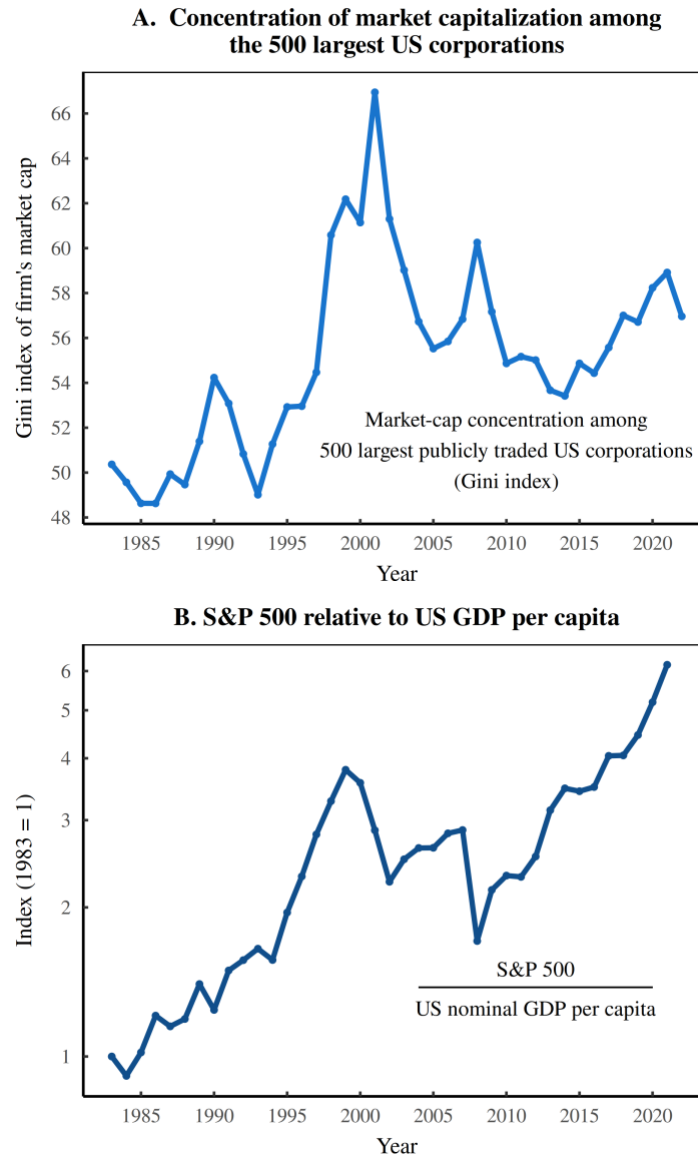
So in Figure 7, we've got evidence that the S&P 500 is an unwitting indicator of US corporate concentration. And it's not because S&P analysts tried to make that happen. (They didn't.) It's because historically, an important part of (apparent) stock-market growth is simply the richest firms getting richer.

To the owners go the spoils

So what happens as rich firms get richer? Well, the rich *owners* of these firms also get richer.

Today, for example, the richest firms are companies like Amazon, Google and Microsoft. Unsurprisingly, the individuals who own these firms — Jeff Bezos, Larry Page, Bill Gates and Sergey Brin — are consistently among the world's richest people. Bringing dynamics into the fold, as these big-tech companies consolidate their holdings, we expect that this consolidation will concentrate wealth in the hands of big-tech owners. In other words, the concentration of *corporate* wealth should beget the concentration of *individual* wealth.

So does it? At least in the United States, the answers seems to be yes. Figure 8 makes the case. Looking at the richest firms and the richest individuals, we find that the concentration of corporate wealth (horizontal axis) strongly predicts the concentration of individual wealth (vertical axis). To the richest owners go the spoils of oligopoly.

Figure 8: The concentration of corporate wealth begets the concentration of individual wealth.
The horizontal axis plots a measure of corporate consolidation — the Gini index of market-cap concentration among the 500 largest publicly-traded US firms. The vertical axis plots a measure individual wealth concentration — the wealth Gini index among the Forbes 400. Evidently elite inequality has been driven in large part by corporate consolidation. (For more details, see the Appendix.)
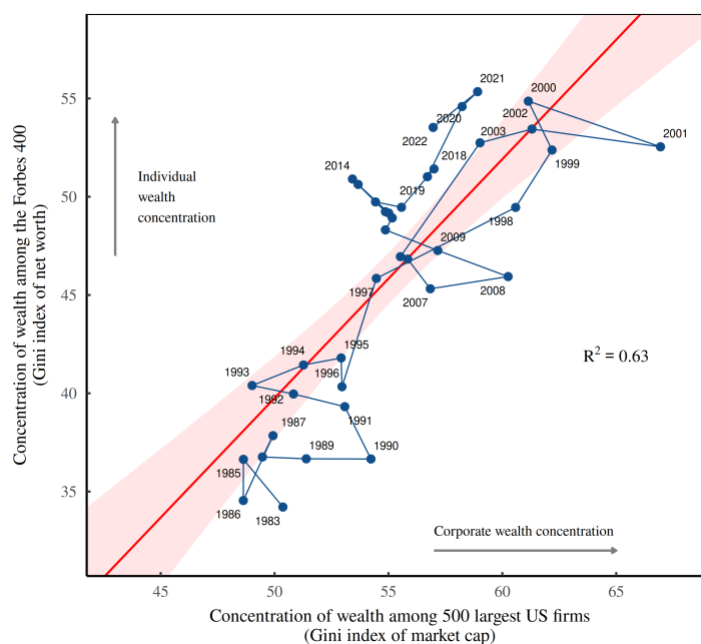
Concentration through acquisition

At this point we've got some fairly incendiary evidence. The 'crime' of elite wealth concentration seems to be tied directly to corporate oligarchy. But before we put the case to rest, let's consider the testimony of the defense's expert witnesses. I'm talking, of course, about neoclassical economists.

Ostensibly, neoclassical economists love competitive markets and hate monopoly. But beginning in the 1980s, a weird thing happened; economists at the University of Chicago started to argue that

despite lacking competition, monopolies could still be 'efficient' (Bork, 1978). Their reasoning was that if monopolists actually behaved badly, they would be undercut by competitors, and their monopoly would be undone. Therefore, if a monopoly exists, it must be because the monopolist is doing what the market wants.

Now the logic here is torturous. We're positing *imaginary* competition to justify a lack of *real-world* competition. But then again, neoclassical economists have never let the real world get in the way of their imaginations. And in this case, the goal of the imaginary theorizing was always obvious: it was designed get government out of the way and allow big corporations to *purchase their way to power*. Backing up a bit, politicians are rarely incensed when a big corporation builds more factories. So in that sense, the government is not opposed to big companies getting bigger. But from a corporate vantage point, factory building is a less-than-ideal route to bigness. The problem is simple: if everyone builds more factories, it leads to 'free run of production' which then collapses profits (Veblen, 1923). So savvy corporations are always looking for a better route to power. And that better route is to *buy* instead of *build*.

The buy-not-build tactic is hardly rocket science. As Jonathan Nitzan and Shimshon Bichler (2009) observe, when you buy your competitor, you solve two problems at once: you accumulate power *and* reduce your competition. The difficulty, though, is that this buy-not-build tactic has the appearance of being a blatant power grab. So there's the risk that an entrepreneurial government might get in the way.

That's where Chicago-school theorists come in. Starting in the 1980s, they successfully preached an ideology that got the government out of the way. The net result is the modern corporate landscape, forged in large part by a string of government-approved corporate acquisitions.

Tech monopolist Google has been a prime benefactor of this buy-not-build tactic. As Cory Doctorow notes, "Google didn't *invent* its way to glory — it *bought* its way there." He continues:

> Google's success stories (its ad-tech stack, its mobile platform, its collaborative office suite, its server-management tech, its video platform …) are all acquisitions. (Doctorow, 2022)

The same strategy holds for most of today's corporate oligarchies. Their tentacles have largely been *bought*, not *built*. On this front, the numbers don't lie: the consolidated corporate landscape of the 21st century was forged by a massive, neoliberal wave of mergers and acquisitions.

Let's have a look at the tsunami.

To quantify the scale of mergers and acquisitions, we'll turn to an index called the *buy-to-build* ratio. As the name suggests, the buy-to-build ratio measures the corporate proclivity for *buying* other companies instead of *building* new capacity. Created by Jonathan Nitzan and Shimshon Bichler (and first published in 2001), the buy-to-build ratio takes the value of corporate mergers and acquisitions and divides them by the value of greenfield investments. The greater this buy-to-build ratio, the more that corporations are buying (and not building) their way to power.

As I've alluded, the neoliberal era saw a massive wave of corporate mergers and acquisitions. As a result, from 1980 to 2000, the US buy-to-build ratio jumped nearly tenfold. And guess what accompanied this acquisition wave. That's right … a sharp rise in *corporate concentration*.

Figure 9 shows the connection. As the US buy-to-build ratio increased (horizontal axis), so did the market-cap concentration among the largest US firms (vertical axis). The lesson is clear: over the last forty years, big corporations have been buying their way to consolidated power.

Figure 9: US corporate concentration has been fueled by mergers and acquisitions.
This figure compares the market-cap concentration of the 500 largest US firms (vertical axis) to the US buy-to-build ratio (horizontal axis). The buy-to-build ratio measures the value of corporate mergers and acquisitions relative to greenfield investments. (I've used buy-to-build estimates from Joseph Francis, 2013). The correlation shown here suggests that the neoliberal wave of corporate concentration was fueled by a corporate buying spree. (For more details, see the Appendix.)
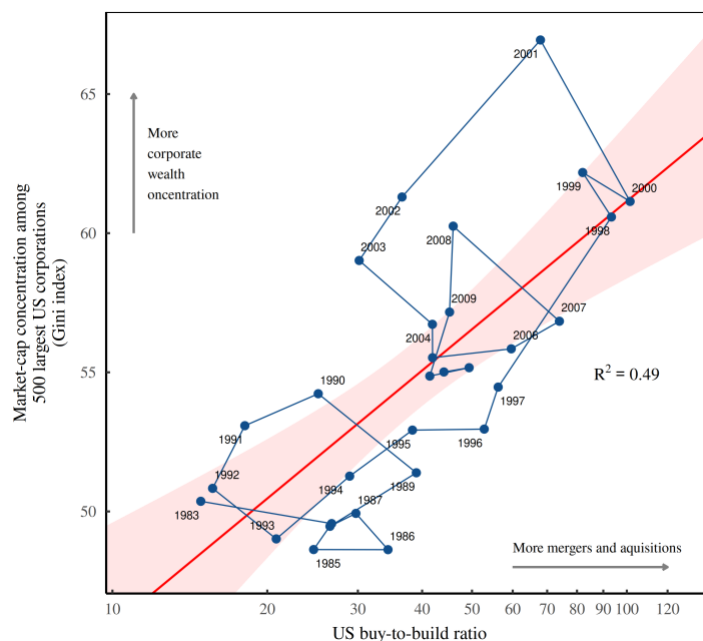
Competition is for losers

One of the (few) nice things about living in an era of concentrated corporate power is that modern plutocrats are brash enough to speak plainly about their ambitions. Forget the arcane language wielded by Chicago-school economists. Today's plutes — men like Peter Thiel — say the quiet part out loud. If you want to "capture lasting value", Thiel proclaims, "look to build a monopoly". Or in mantra form, "*competition is for losers*" (Thiel, 2014).

John D. Rockefeller would be proud.

Speaking of Rockefeller, he was one of the principle funders of the University of Chicago (Collier & Horowitz, 1976). Ironic, isn't it? Rockefeller, like Thiel, spoke openly about his pursuit of power and personal enrichment. So if, during Rockefeller's life, someone had connected elite wealth concentration to corporate consolidation, the reaction would have been "Well, that's obvious."

Fast forward to the 1980s and the connection became not-so obvious, at least to economists. And that's thanks in large part to Rockefeller's Chicago-school investment, which pumped out decades worth of pro-oligarch propaganda.

Today, we've come full circle. Billionaires like Peter Thiel are so hubristic that they speak brazenly about their pursuit of power, laying bare their inner robber baron. The upshot to this plute bravado is that few people will be surprised by the straight line that connects corporate oligarchy with the concentration of elite wealth.

Sources and Methods

Data and code for this article are available at the Open Science Framework: https://osf.io/6ybc3/

US distribution of wealth
In Figure 1, I calculated the US wealth Gini index using data from the World Inequality Database. Wealth threshold data is from series thwealj992. Wealth share data is from series shwealj992.

Forbes data
I scraped historic Forbes 400 data from many corners of the internet. For notes about the specific sources, see Fix (2023b). Data for global billionaire wealth is from the Forbes real-time billionaire list. I've been keeping a daily archive of the list since October 2021.

S&P 500
Data for the S&P 500 is from two sources. For Figure 3, I downloaded the daily data using the R package tidyquant, series ^GSPC. The long-term S&P 500 data plotted in Figure 4 is from Robert Shiller, available at http://www.econ.yale.edu/~shiller/data.htm.

US nominal GDP per capita
Data for US nominal GDP is from:
   • 1983–2021: Bureau of Economic Analysis, Table 1.1.5
   • 2021–2023: quarterly GDP per capita data from FRED, series A939RC0Q052SBEA.
Data for US population is from:
   • 1983–2021: World Bank, series SP.POP.TOTL

Market capitalization
Data for the market cap of the largest US companies (Figure 5) is from Compustat. To calculate each company's market cap, I took the number of shares outstanding (series csho) and multiplied it by the annual closing share price (series prcc_c).

Buy-to-build ratio
The buy-to-build ratio is calculated by taking the value of corporate mergers and acquisitions and dividing it by the value of gross fixed capital formation (which is a rough measurement of 'greenfield' investment). Compiling the requisite historical data for this calculation is no small task. The main hurdle, as Jonathan Nitzan notes, is that "there are no systematic historical time series for mergers and acquisitions" (2001). So any estimate must piece together a hodgepodge of different sources.
In this article, I've used Joseph Francis' (2013) estimates for the US buy-to-build ratio. The data is available here: http://joefrancis.info/databases/Francis_buy_to_build.xlsx. It's also worth reading Bichler and Nitzan's comments on Francis' calculation (Bichler & Nitzan, 2013).

Speaking of wealth and poverty

It turns out that social scientists (at least those who write in English) haven't always prioritized studying 'poverty' over 'wealth'. Figure 10 makes the case using data from the Google English corpus.

Two centuries ago, the phrase 'cause of wealth' was just as popular as the phrase 'cause of poverty'. And that makes sense. In 1776, Adam Smith published his famous tome about the *wealth* of nations (Smith, 1776). Clearly, he and other political economists wanted to understand wealth. But throughout the 19th century, interest in wealth waned, leading to today's dichotomy. Judging by word count, about ten times as many people study the 'cause of poverty' as study the 'cause of wealth'.

Figure 10: From wealth to poverty.
Apparently, social scientists have not always prioritized the study of poverty over the study of wealth. Judging by word frequency from the Google English corpus, 18th century English writers were quite interested in the 'cause of wealth' — at least as interested as they were in the 'cause of poverty'. But over the 19th century, the study of wealth fell out of favor, leading to today's dichotomy. Studying the 'cause of wealth' is now about ten times less popular than studying the 'cause of poverty'. [Notes: I downloaded Google ngram data using the R package ngramr.]
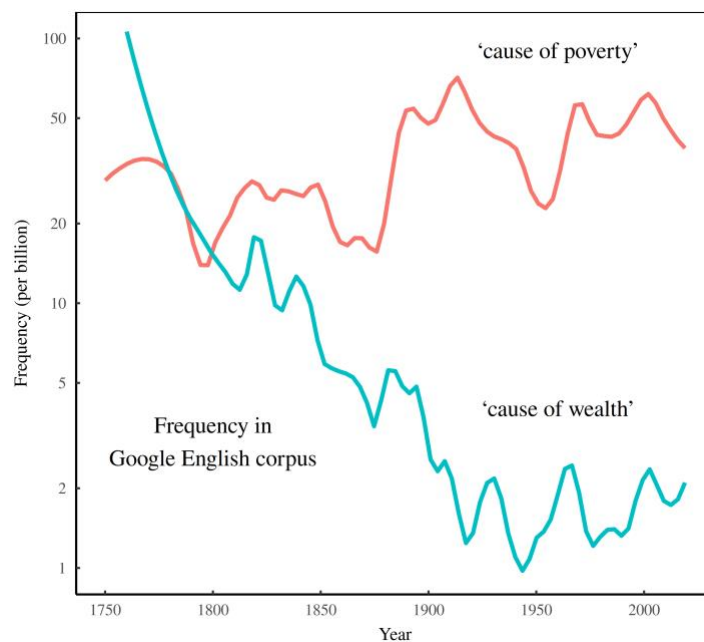
Acknowledgements

References

Bichler, S., & Nitzan, J. (2013). Francis' buy-to-build estimates for Britain and the United States: A comment. *RECASP*, *1*(1), 73–78. https://capitalaspower.com/2013/02/francis-buy-to-build-estimates-for-britain-and-the-united-states-a-comment/

Bork, R. (1978). *The antitrust paradox: A policy at war with itself*. Basic Books.

Collier, P., & Horowitz, D. (1976). *The Rockefellers: An American dynasty*. Holt, Rinchart and Winston.

De Silva, M. (2019). The art and science of stewarding the S&P 500. *Quartz*. https://qz.com/1587963/how-the-sp-500-is-built-and-who-decides-what-companies-go-in-it

Deltas, G. (2003). The small-sample bias of the Gini coefficient: Results and implications for empirical research. *Review of Economics and Statistics*, *85*(1), 226–234. http://www.mitpressjournals.org/doi/abs/10.1162/rest.2003.85.1.226

Doctorow, C. (2022). The true genius of tech leaders: Capital, not vision. *Pluralistic*. https://pluralistic.net/2022/10/02/the-true-genius-of-tech-leaders/

Fix, B. (2020). Are we measuring inequality the wrong way? *Economics from the Top Down*. https://economicsfromthetopdown.com/2019/06/06/are-we-measuring-inequality-the-wrong-way/

Fix, B. (2023a). Billionaires are so predictable. *Economics from the Top Down*. https://economicsfromthetopdown.com/2023/09/03/billionaires-are-so-predictable/

Fix, B. (2023b). How the rich get richer. *Economics from the Top Down*. https://economicsfromthetopdown.com/2023/09/24/how-the-rich-get-richer/

Fix, B. (2023c). The Great Gatsby curve among America's über rich. *Economics from the Top Down*. https://economicsfromthetopdown.com/2023/10/13/the-great-gatsby-curve-among-americas-uber-rich/

Fix, B., & Cochrane, D. T. (2023). Mapping the ownership network of Canada's billionaire families. *Economics from the Top Down*. https://economicsfromthetopdown.com/2023/06/23/mapping-the-ownership-network-of-canadas-billionaire-families/

Francis, J. (2013). The buy-to-build indicator: New estimates for Britain and the United States. *Review of Capital as Power*, *1*(1), 63–72. https://capitalaspower.com/2013/03/the-buy-to-build-indicator-new-estimates-for-britain-and-the-united-states/

Gleick, J. (1993). *Genius: The life and science of Richard Feynman*. Vintage.

Hickel, J. (2019). How not to measure inequality. *Jasonhickel.org*. https://www.jasonhickel.org/blog/2019/5/15/how-not-to-measure-inequality

Houlihan, G. (2021). The legacy of the crushed 1981 PATCO strike. *Jacobin*. https://jacobin.com/2021/08/reagan-patco-1981-strike-legacy-air-traffic-controllers-union-public-sector-strikebreaking

Nitzan, J. (2001). Regimes of differential accumulation: Mergers, stagflation and the logic of globalization. *Review of International Political Economy*, *8*(2), 226–274. https://bnarchives.yorku.ca/3/

Nitzan, J., & Bichler, S. (2009). *Capital as power: A study of order and creorder*. New York: Routledge.

Piketty, T. (2014). *Capital in the twenty-first century*. Cambridge: Harvard University Press.

Smith, A. (1776). *An inquiry into the nature and causes of the wealth of nations*. Edinburgh: A.; C. Black.

S&P Dow Jones. (2024). Index mathematics methodology. *S&P Global*. https://www.spglobal.com/spdji/en/documents/methodologies/methodology-index-math.pdf

Thiel, P. (2014). Competition is for losers. *The Wall Street Journal*, *12*. https://www.wsj.com/articles/peter-thiel-competition-is-for-losers-1410535536

Veblen, T. (1923). *Absentee ownership: Business enterprise in recent times: The case of America*. Transaction Pub.

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