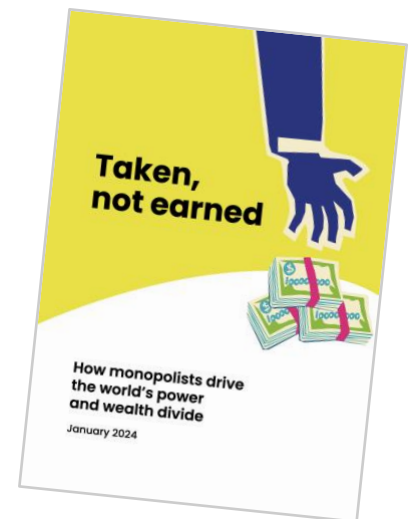


Big Pharma



The medicines we need to keep us healthy are increasingly controlled by a small number of wealthy corporations. This has an enormous impact on what medicines are produced, who gets to use those medicines, and what price they have to pay to get hold of them. But it's also having a profound impact on the industry itself – hollowing out the companies involved and making them less able to produce the medicines of tomorrow.

Between 1995 and 2015 in the US, [60 pharmaceutical companies](#) merged into just ten. These corporations make many medicines under patent, giving them explicit monopolies over the drugs to which they own the intellectual property rights.

But this doesn't mean they discovered these drugs. In fact, **most breakthroughs in medicines come through enormous public sector funding**, and the work of university departments and small biotech companies. Contrary to what we're told about private sector innovation, public sector funding is usually most important at the riskiest stage of development.

How we got here

There was a time when pharmaceutical corporations saw research, development and manufacturing as the bedrock of their industry. These very powerful corporations still often behaved in deeply inappropriate ways, notably in the pricing and marketing of their drugs. For example, back in 1958, [a handful of companies](#) cornered the antibiotics market and worked to keep the prices of tetracycline high, provoking lawsuits and inspiring the British government to override their monopolies and import generic antibiotics from Italy.

But the situation got much worse in the 1990s. Executives at the biggest corporations recognised that their profits were deeply intertwined with the monopolies they held on medicines – far more so than with in-house cutting edge

research or cost effective manufacturing. So some of the biggest players in the industry turned their attentions towards legal strategies to defend and extend their patents, and on lobbyists to push for laws even more friendly to their monopolies (see below).

To obtain the research that could form the basis of these monopolies, the big pharma players engaged in mergers and acquisitions, [driving waves of ever greater](#) concentration in the industry. Increasingly, small business saw only one option which allowed them to get their research out there: a buyout by one of the biggest corporations in the industry. [A Stat news analysis in 2018](#) concluded that **Pfizer developed only a fraction – about 23% – of its drugs in-house. The rest were acquired.**

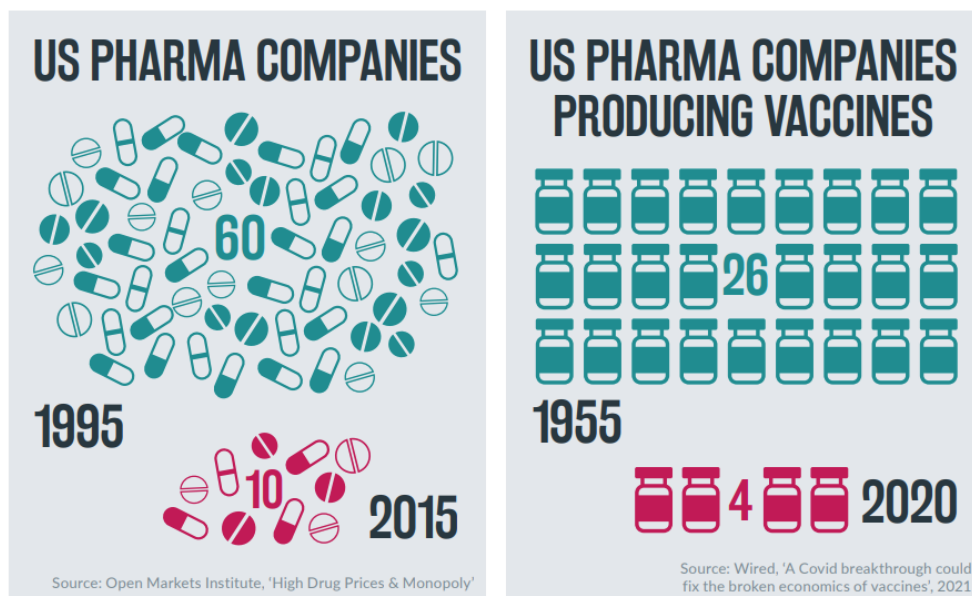
Having gained monopoly power, Big Pharma firms can then charge whatever they can get away with for new drugs. Even in countries with well-funded public health systems, the price of new medicines is putting an unbearable strain on services. Recent research suggests Britain's [NHS has spent £13 billion](#) on just 10 super expensive drugs, with the overwhelming amount of that money taking the form of excess profits on the part of the companies that control the drugs.

In the United States the situation is even more serious as, until recently, the federal government has been unable to even engage in negotiations over prices.

Across the board, new medicines are becoming much more expensive. One example is the anti-inflammatory drug Humira, used to treat Crohn's disease and rheumatoid arthritis. Humira is owned [by pharma giant AbbVie](#) – but they didn't invent the medicine. Rather, AbbVie bought the rights to the medicine and massively inflated the price in subsequent years despite making no real changes to the drug's effectiveness.

In the US, Humira costs around \$77,000 for a year's supply – an incredible 470% more than when the drug was launched in 2003. In Britain it's cheaper, thanks to the ability of the NHS to effectively negotiate medicine prices, but still close to £11,000 per year, the highest expenditure for a single medicine in the NHS in 2014-16. In such cases, the NHS is forced to ration the medicine.

This is how pharmaceutical corporations are [routinely able to return far more](#) profit to their rich shareholders than they plough back into research and development. In fact, oftentimes more is returned to shareholders than companies make in profits – a process which can only work by taking on large amounts of debt and, long-term, hollowing out the company. This is part of a wider trend of what academics call "[hollow firms.](#)"



Key tactic: build monopoly power via intellectual property, rather than innovate

At the heart of Big Pharma's power are the monopolies these corporations enjoy over individual medicines and the knowhow behind them. These privileges are laid down in intellectual property rules, which grant exclusive rights over things like trademarks, brand, copyrights, and patents for a set period of time. Intellectual property rules have become more stringent and enforceable over the last 40 years, and they play a key role in fuelling the growing concentration of corporate power.

Traditionally, patents on medicines tended to be [seen as controversial](#). Even in many rich countries, walling off vital public knowledge for commercial profit was not the 'done thing' until relatively recently. Across the global south, patent laws tended to be fairly relaxed or even non-existent until the mid-1990s. There was an understanding, embedded in the post-war system of regulated capitalism, that some countries required different rules from others – particularly those countries that needed to develop their economies. Relaxed patent laws meant that southern countries could learn from more advanced economies.

This changed in the 1990s when intellectual property rules were effectively written into international law, at the urging of former Big Pharma executives as well as big business representatives such as those from the newly emerging high-tech sector. The rules became part of a global trade agreement called TRIPS, or more fully, the Agreement on Trade-Related Aspects of Intellectual Property Rights.

The development of TRIPS was therefore a truly audacious and hugely significant move. In effect, TRIPS ensured walls were built around knowledge right around the world, protecting corporate profits and disadvantaging countries trying to develop their own industries. Writer and journalist [Alexander Zaitchik](#) describes the TRIPS backstory as “almost impossibly shallow and grubby; its founding documents younger than Justin Bieber... born as a brute and profoundly undemocratic expression of concentrated corporate power.”

As intellectual property regimes become fiercer, innovation falls

One justification given for this move was that the more stringent intellectual property rules would reward, and therefore encourage, innovation. But the argument doesn't stack up. In fact, as intellectual property rules got tighter and more enforceable, innovation has plummeted.

Today, intellectual property and other so-called ‘intangible assets’ make up ever greater proportions of Big Pharma’s balance sheets compared to ‘real’ assets like factories and laboratories. And Big Pharma spends more of its resources trying to bolster the value of its intangible assets as opposed to engaging in productive activity. One report looks at the 12 best selling drugs in the US, and finds that drug makers [filed for an enormous 1,500 attempted](#) patents on them – the vast majority successful – aimed at extending their monopolies far beyond the already lengthy twenty years of protection they enjoy as standard. Lawyers and lobbyists have become mainstays of this industry, rather than researchers and medical experts.

Studies have found [strong evidence](#) of a correlation between investment in intangible assets and industry concentration. Patenting, in particular, is a highly concentrated field, with a small group of corporations increasingly [owning a huge quantity of patents](#).

It has indirect impacts too. Intangible assets like intellectual property are nearly impossible to accurately value, but corporations nonetheless try to put a high value on these intangibles and spend a fortune protecting them. And precisely because they aren't physical, these assets are much easier to register in tax havens.

None of this makes our economy more efficient, effective or productive, but rather turns corporations primarily into vehicles for extracting maximum real value from the wider economy and using it to line the pockets of the already wealthy, at the cost of undermining the foundations of the economy as a whole. Speaking of the UK economy, Professors Adam Leaver and Richard Murphy [write that](#), far from being the “national champions – R&D powerhouses and drivers of UK productivity”, Big Pharma companies are good for shareholders, but “increasingly flimsy”,

“increasingly intangible, and don’t appear to be improving the underlying productivity of each firm.” But despite all of this, they remain extremely powerful actors, “and maintain an effective gatekeeper position” actively preventing smaller competitors from challenging their dominance.

Impacts: paying for drugs twice

One result of the increasing concentration of the industry is unsustainable high prices, as we’ve already seen. But it’s even more galling that the public is actually paying for these drugs twice, thanks to high research costs borne by the public sector to begin with.

We can clearly see how this played out in the Covid-19 pandemic. Before the pandemic, the big industry players put almost no time into researching coronaviruses, or any of the other pathogens that might cause a pandemic. The research that was done, was carried out by public institutions or small businesses, often with large chunks of public money.

But once the pandemic broke out, that research was effectively transferred to Big Pharma corporations, with huge amounts of additional cash put on the table to get vaccines trialled, tested, and into arms. This allowed those corporations to make key decisions about the rollout of the vaccines, resulting in severe inequality in who received the vaccines and who didn’t. The seemingly most effective mRNA vaccines were sold overwhelmingly to the richest part of the world, while the majority world was left without.

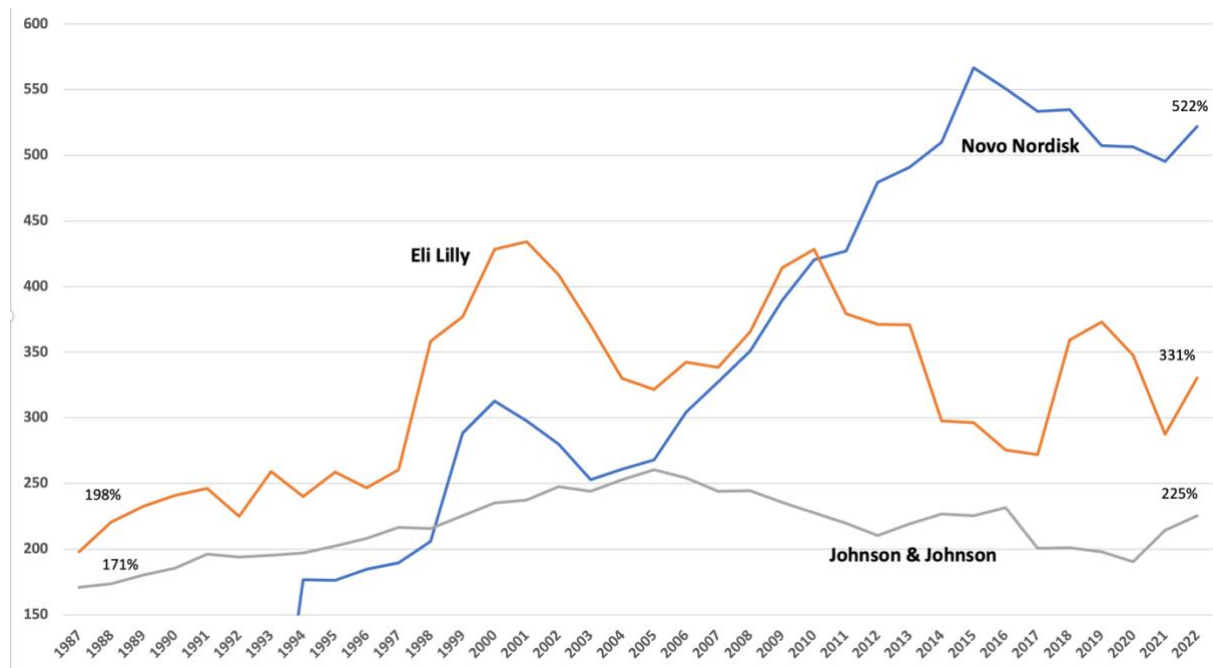
The situation got even worse when these same corporations, as a direct result of their legal monopolies, refused to share the knowhow behind the vaccines with countries that could have produced them. One group of experts discovered that at least [100 factories around](#) the world could have safely made mRNA vaccines if they’d have the knowhow transferred. Supply was, instead, artificially constrained by the monopolies enjoyed by corporations like Pfizer and Moderna.

These same monopolies also allowed the companies to charge high prices, and make vast sums of money for their investors. Pfizer claims that its vaccine costs just under £5 per dose to produce. ([Others have suggested it could be much cheaper.](#)) Either way, the company is selling doses at a huge profit – the UK government paid [£18 a shot](#) for its first order, £22 for its most recent purchase. That means the NHS has paid a mark-up of [at least £2bn](#) – six times the cost of the pay rise the government agreed to give nurses last year.

It has been [claimed](#) that, in the US, Pfizer even tried to pitch their medicine to the US government for an eye-popping \$100 a dose. Tom Frieden, a former director of the US Centers for Disease Control and Prevention, accused the firm of [“war](#)

[profiteering](#)". And indeed, Pfizer is now charging [\\$85 in the US](#) for its vaccine, and has suggested an [official price](#) of between \$110 and \$130 – an extraordinary price hike for a product which has been on the market for more than 2 years already.

We can see this as a generalised trend through what economists call “markups” – the difference between the sale prices of goods and services, and the costs of materials used to produce them, as shown in this graph prepared for our main report on the world’s top 20 biggest companies.



Source: from Bloomberg data

In our study of over 30,000 companies¹, the bottom 50 percent of firms by size enjoyed markups of 25 percent on average – while here we see markups for the biggest pharma companies at hundreds of percent – and rising.

Drugs for the rich

Beyond Covid-19, the current monopoly model is preventing us from getting the medicines we need, because it has allowed the industry to become addicted to sky high profits that can only be earned from certain types of drugs. Medicines to treat illness suffered by poorer people in poorer countries hold little appeal. Neither, as we’ve seen, do diseases that might cause the next pandemic.

¹ Taken, not earned: How monopolists drive the world’s power and wealth divide, Balanced Economy Project, SOMO, Global Justice Now, LobbyControl, Jan 17, 2024.

Between 2000 and 2011, only 4% - [that's 37 of 850](#) - newly approved products were for neglected diseases that affect middle and low-income countries. While tuberculosis and malaria kill millions, those people are mostly poor, so there's relatively little profit to be made from anything produced to treat them. In [the last 50 years](#), only two new treatments for TB have been developed, while 14 new treatments have been developed for a condition that kills no one: hay fever.

Before the pandemic, vaccines had become a Big Pharma backwater. Vaccines do make money but tend to be less profitable than other drug research. This is partly because, in many areas, one or two jabs can provide a lifetime's immunity. That's why, in the US, the number of companies producing vaccines [fell from 26 in 1955](#), to 18 in 1980, to a mere four in 2020. This left us at a huge disadvantage when dealing with Covid-19, and hindered the world's ability to rapidly produce sufficient vaccines.

Valuable research *is* often happening in small companies and university departments, backed by massive state spending; particularly in the US which enjoys "the most [formidable national system](#) of innovation in history." But this hasn't encouraged Big Pharma to invest, rather the opposite. In-house [R&D has declined within Big Pharma](#), with one study, focussing on the drugs actually invented rather than pharma's claimed R&D budget, found that just 10 of Pfizer's 44 products and two of Johnson & Johnson's 18 leading products were discovered in-house. Large drug companies in the US have only [initiated research on only 20%](#) of drugs approved since 2009.

Evergreening: low innovation, big profits

A particular specialty of the industry is something known as 'ever-greening' - making negligible changes to drugs so that patents can be renewed and lengthened, preventing competition. This produces something called 'me-too' drugs, which tweak existing knowledge, but offer little-to-no new benefit over what's currently on the market. One example is Asacol, used to treat Crohn's disease and other illnesses which involve inflammation of the intestines. When the medicine was reaching the end of its patent life, the producers created a new drug called Delzicol - an Asacol tablet inside a capsule. As one expert in [innovation said](#) "If the capsule was cut open, the original Asacol tablet fell out." These drugs do, of course, bring substantial profits owing to the much lower financial risk involved.

According to one [German study in 2017](#), the majority of new medicines - 57% - had no added therapeutic value at all. A further 16% were either less effective, had only minor benefit or had a benefit which wasn't quantifiable. Another [study shows](#) that only one out of four new drugs launched in the UK between 2001-2011 were 'highly innovative'. Moderna and the modern billionaires

Stéphane Bancel is the head of Moderna, a company that made its fortune thanks to its Covid-19 mRNA vaccine. So successful was this vaccine, that Bancel became a multi-billionaire during the pandemic.

He is now registered at 624 in the Forbes [richest people](#) list, worth \$4.4 billion – mostly based on Bancel’s large stock-holding in Moderna (at one point as the share price spiked, his stake was worth over \$12 billion). Recompense by stock has become normal in much of the business world, and helps ruthlessly focus chief executives attention on maximising their return to shareholders. In Spring 2021, the [People’s Vaccine Alliance](#) calculated that the Covid-19 vaccines had created nine new billionaires.

Moderna’s recent history demonstrates the falsity of common arguments that current stringent intellectual property rules incentivise innovation.

Moderna is a specialist in mRNA technology, with the company’s name based on the acronym. MRNA has revolutionised vaccine technology and holds out the possibility of cutting-edge inoculations or treatments for a wide range of diseases including HIV, cystic fibrosis, certain types of cancers and malaria. MRNA’s adaptability also potentially means it can be used to deal with all manner of rare diseases that only affect a small number of patients, because small batches of vaccine can be developed and produced.

But the story of mRNA long precedes Moderna. As with all scientific breakthroughs, scientists stand on the shoulders of others: decades of research paved the way for mRNA vaccines, with public support particularly important at an early stage, when companies had no appetite for the risks involved.

This is in contrast to another myth often peddled by free market ideologues: that risks are taken by entrepreneurs driving innovation, while the public sector, is a bureaucratic dead weight on the economy. Pharmaceutical innovation shows it to be completely false.

The origins of Moderna

Back in the 1990s, mRNA was regarded as such a scientific backwater [that early mRNA scientists like Katalin Karikó](#) struggled to get any funding, eventually even earning herself a demotion from the University of Pennsylvania. Since then, so much public resource has gone into developing the vaccine which Moderna produces that it was labelled the [‘NIH vaccine’](#) by Public Citizen (NIH is a major US public research institution). According to [experts](#) “the vaccine was jointly developed with the NIH, and... US taxpayers are financing 100 percent of the vaccine’s development.” [Peter Maybarduk](#) of Public Citizen said of Moderna’s vaccine “This is the people’s vaccine. The NIH’s vaccine.”

One of the scientists who played a role in the mRNA revolution [put it succinctly](#). “You really can’t claim credit, we’re talking hundreds, probably thousands of people who have been working together.” Or, as Katalin Karikó said “Everyone just incrementally added something – including me.”

Moderna was formed in 2010, by scientist Derrick Rossi and colleagues, who managed to raise sufficient funds to develop some of this research. A year later, the company’s investors hired the [abrasive](#) Stéphane Bancel as CEO: a very different beast to the scientists who had been working on mRNA up to this point. [Driven by his ambition](#) to run an important company, Bancel was a hard-nosed businessman, whose early days at Moderna were characterised by secrecy, a high turnover of staff, and a drive to attract venture capital. Moderna’s engagement with the outside world seemed more attuned to generating investment than to open, scientific discussions. As one [former employee said](#) “They’re running an investment firm, and then hopefully it also develops a drug that’s successful.”

Moderna soon generated astonishing levels of profit. In early 2022, Moderna announced sales on its Covid vaccine the previous year had [brought in \\$17.7 billion](#). Of this, Moderna’s \$13 billion pre-tax profit – around \$36 million a day in 2021 – means it has a profit margin of around 70%: the kind of margin you expect to find on luxury goods, not essential medicines. To put it in perspective, [the average pre-tax profit margin](#) of the 500 largest US companies in 2021 was around 15%. [Experts have calculated](#) that Moderna’s vaccines could be produced for as little as \$2.85 a dose, yet they are in fact, the most expensive vaccines on the market, averaging between \$19 and \$24 a dose, up to \$37 to some customers.

Some might say, ‘but none of this really matters: Even if Bancel and friends made a killing, ultimately we have a vaccine, and that has saved many lives and much money.’ But this misses the point. Moderna’s business model *encouraged* secrecy and competition in place of collaboration. It represents poor value for money, which has drained the public sector. And it created terrible inequality in access to vaccines, which damaged our ability to overcome the pandemic.

Moderna’s pharmaceutical model is exemplified by the string of lawsuits it is now involved in. Litigation is a major item in the budget of most Big Pharma companies today, because maintaining full control of intellectual property is essential for maximising profits. Moderna also seems at pains to conceal the basic truth about its public support, even to the point of legal action. It was even accused of [breach of contract](#) in the US for not transparently stating the proportion of public funding for its vaccine. And it refused to even recognise three federal scientists as co-inventors on some of its patent applications, prompting a [legal challenge](#) on the

part of the American government. [Scientists have spoken](#) on a “betrayal” by Moderna.

This is about more than recognition. By excluding scientists critical to the drug’s development from the principal patent application, Moderna is preventing the government from having a meaningful say in who can produce the vaccine. As [Zain Rizvi of Public Citizen said](#): “It’s not just about bragging rights. It’s also about supply. Patents are development monopolies, and **in a pandemic, it is a terrible idea to have a private corporation have a monopoly on part of a lifesaving technology.**”

Author

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