ChatGPT

Towards a Frictionless Economy: Deflationary Services and the Impact of Financialization (2025–2030)

Abstract

In an ideal *frictionless* market, prices of goods and services would align closely with their minimal production costs, leading to widespread deflationary trends as technology drives efficiency. This whitepaper examines why, despite rapid technological advances that should make many services **order-of-magnitude** cheaper, the world has recently experienced high inflation. We explore the hypothesis that **financialization** and other market frictions are largely responsible for keeping prices high, using global case studies in healthcare, education, and other service sectors. The analysis highlights how emerging technologies (AI, digital platforms, automation) could reduce costs of services like healthcare and education by 5–10×, and why these deflationary benefits have yet to fully materialize. We also discuss the role of corporate pricing power, intermediaries, and easy credit in sustaining inflation. Finally, we provide an outlook from now till 2030, focusing on how removing artificial frictions could unlock deflationary value for consumers worldwide in the coming years.

Introduction

Over the past few years, consumers worldwide have faced rising prices for essentials from food to fuel – a stark contrast to the deflationary promise of modern technology. In theory, advances in automation, the internet, and AI should be driving costs *down*: technology is inherently **deflationary**, meaning it enables more output with less input [1]. In a truly frictionless economy with perfect competition and no unnecessary intermediaries, efficiency gains would be passed on to consumers as lower prices. Indeed, as tech investor Jeff Booth notes, "technology is deflationary" and we are entering an age of technological deflation unlike any before [1]. By this logic, many services today could be dramatically cheaper than they are.

Why, then, are prices still rising? The answer may lie in the *frictions* – the market inefficiencies and financial structures – that prevent full realization of tech-driven cost declines. Governments and central banks explicitly target a moderate inflation rate, and the financial system is built on decades of inflationary expectations [2]. In recent years, extraordinary monetary expansion and **financialization** of the economy (the growing role of financial motives, markets, and intermediaries in all sectors) have propped up demand and prices artificially [3]. This has come in the form of easy credit, asset bubbles, and corporate strategies prioritizing profit maximization over price reduction. In effect, while technology pushes prices down, financialization and market power push prices up – creating a tug-of-war between deflationary and inflationary forces.

Hypothesis: The only reason broad inflation persists, despite ample technological efficiency, is due to imposed frictions from financialization of markets. If markets were truly frictionless – with transparent

pricing, minimal intermediaries, and competition – we would likely see outright *deflation* in many sectors. We would already be driving reliable new cars priced at $7,000, paying a few dollars for prescriptions, and accessing unlimited mental health services for $20 per month, as opposed to the vastly higher costs we face today. The sections below analyze this hypothesis in depth, with a focus on global trends from now through 2030. We examine key service sectors that are primed for an order-of-magnitude cost reduction, and identify what frictions are preventing those savings from reaching consumers.

The Deflationary Potential of Technology

Fundamentally, technology reduces the marginal cost of producing goods and delivering services. When markets are competitive, these cost reductions translate into lower prices. Several deflationary forces are at work today:

- **Automation and AI:** Automation streamlines labor-intensive processes, and artificial intelligence can perform cognitive tasks at virtually zero marginal cost once developed. This increases productivity multifold without equivalent increase in input costs. For example, AI-driven systems can analyze medical scans, write reports, or provide customer service at a tiny fraction of the cost of human labor. Such improvements should make services cheaper over time, not more expensive.

- **Digital Distribution:** The internet enables *near-zero marginal cost* delivery of many services (information, media, software, education). Once digital content is created, adding one more user costs almost nothing [4]. As an illustration, an online course or massive open online course (MOOC) can educate thousands at virtually no extra cost per student – the marginal cost of adding another online learner is essentially zero [4]. In a frictionless scenario, this means the price of online education or digital products could trend toward zero as well, aside from minor fees for platform maintenance.

- **Global Connectivity and Competition:** A frictionless global market allows consumers to find the lowest-cost providers worldwide. E-commerce and digital platforms have already introduced some of this competition – for instance, electronics and computing equipment have seen prices fall or performance soar without equivalent cost increases over decades (the classic deflationary trend of tech). If extended to services, a student in Africa could attend lectures from top professors via the internet for a negligible fee, or a patient in a remote village could get medical advice from an AI or tele-doctor for pennies. The technology exists for this kind of radical accessibility at low cost.

- **Economies of Scale and Zero Marginal Cost Society:** As Jeremy Rifkin and others have theorized, we are moving toward a "zero marginal cost" society in many domains, where the traditional scarcity-based economic models break down. When solar panels produce virtually free electricity after installation, or an app can serve an extra million users with no extra server cost, traditional pricing power diminishes. We have seen hints of this: solar and wind energy costs have plummeted, and data bandwidth costs per gigabyte have fallen sharply. These trends suggest a natural deflationary progression as technology matures.

In short, absent countervailing forces, the **natural state of a tech-enabled economy would be deflationary**, with productivity gains making everything from transportation to healthcare progressively cheaper. One investor describes that improvements in technology and efficiency *"would naturally create an increasing surplus of goods and services, driving prices down"*, implying that a truly free market would see

general price deflation over time [5] [6]. Many modern economists acknowledge these deflationary pressures but note that our financial system is *not* built to accommodate falling prices [2]. The result has been aggressive monetary policy (e.g. low interest rates, quantitative easing) to generate inflation and "growth" even as technology should be making things cheaper. This dynamic is at the heart of our current paradox.

Financialization and Frictions Driving Inflation

If technology is pushing prices down, what is pushing them up? The evidence increasingly points to **financialization and market frictions** as major drivers of recent inflation. By financialization, we mean the growing influence of financial actors (banks, investment funds, private equity, etc.), complex financial products, and profit-maximizing incentives in sectors that previously operated more on production or service ethos. Several facets of this can be identified globally:

- **Easy Credit and Money Supply Expansion:** In the wake of economic crises, central banks have pumped trillions of dollars into the global economy, creating historically low interest rates and abundant credit. This *artificial liquidity* boosted asset prices (stocks, real estate) and eventually consumer prices. Jeff Booth observes that the only thing sustaining growth in recent years has been "easy credit, created at a pace that is hard to comprehend," which keeps us locked in an inflationary system despite deflationary tech [3]. Global debt has surged to record levels (over 320% of GDP by 2024) as policymakers continuously stimulate demand [7]. Essentially, we are printing money to outrun the natural deflation from technology. This is a key friction: a truly frictionless economy would not require constantly inflating the money supply to thrive.

- **Corporate Pricing Power and "Greedflation":** Markets in many countries have become concentrated, with a few large firms dominating sectors (from Big Tech to energy and food distribution). This oligopoly or monopoly power allows companies to raise prices above costs without fear of losing customers – a friction in the competitive mechanism. Studies of the 2021–2023 inflation spike found that a significant portion of price increases cannot be explained by higher input costs alone, but by expanded profit margins. For instance, an analysis in the UK showed business profits in 2022 rose ~30% and **"far outpaced increases in costs,"** indicating companies were hiking prices well above their cost rises [8]. The top 11% of firms enjoyed *"super-profits"* by pushing through aggressive price increases, a phenomenon dubbed **"greedflation"** [9]. Even the Bank of England acknowledged in 2023 that price gouging contributed to inflation [10]. In the U.S., where many industries are dominated by a few players, **excess profits were even larger** and helped drive inflation to multi-decade highs [11]. In a frictionless market with perfect competition, such profiteering would be quickly undercut by new entrants, forcing prices back down. But real-world frictions – from high barriers to entry, to regulatory capture, to brand power – allow these price hikes to stick. The result is inflation driven not by scarcity but by corporate strategy.

- **Intermediaries and Rent-Seeking:** Financialization often inserts extra layers of intermediaries that each take a cut, driving up consumer prices without adding value. Nowhere is this clearer than in U.S. healthcare and pharmaceuticals. For example, in the prescription drug supply chain, **wholesalers, pharmacies, and pharmacy benefit managers (PBMs) can collectively pocket nearly *two-thirds* of a drug's price** before it reaches the patient [12]. This kind of rent-seeking is pure friction. The drug may cost only a few dollars to manufacture, yet by the time the patient buys it, they could be paying 10-20× the production cost due to markups by these intermediaries. A recent

study found that Medicare (the U.S. public insurer) would have saved $3.6 billion in one year if it paid the same low prices offered by Mark Cuban's Cost Plus Drug company, which bypasses many middlemen [13]. In a frictionless scenario where consumers buy directly at near-production cost, such savings would already be realized system-wide. Similar intermediary markups occur in other industries: consider real estate (multiple brokers, financiers), food (traders and processors between farmer and consumer), or travel (aggregators and agencies). Each link adds friction that inflates prices.

- **Financial Engineering and Short-Termism:** As more sectors get *financialized*, companies are often driven by the demands of shareholders and private investors to maximize short-term returns. This can lead to behaviors that sustain higher prices. For instance, companies may choose stock buybacks or dividends over investing in cost-reducing innovations, or they may cut capacity to keep prices high rather than compete to lower prices. **Private equity acquisition** of businesses often exemplifies this – acquired firms are loaded with debt and pressured to increase profits quickly. In healthcare, studies show when private equity firms buy hospitals or clinics, they swiftly raise prices for patients: acquired U.S. hospitals saw net income jump 27% post-acquisition largely **"driven by a 7–16% increase in hospital charges"** to patients [14]. Quality of care often did not improve (and sometimes worsened), meaning patients paid more for the same or lower value [15] [16]. This is a clear inflationary impact purely from financial engineering – a friction that a truly competitive, patient-centric system would not impose. Similar patterns are seen in rental housing (private investors raising rents), education (for-profit colleges raising tuition aggressively), and other sectors once investment capital floods in.

- **Government Policies and Market Protections:** Another source of friction is policy choices that sustain higher prices, intentionally or not. Patents and intellectual property laws grant temporary monopolies (necessary to incentivize innovation, but they also enable high prices while in effect). Zoning and licensing laws can limit competition (e.g. limited medical licenses keeping doctor visit costs high, or taxi medallions that once kept ride prices high before rideshare disrupted them). Agricultural subsidies, tariffs, and trade barriers can all create price floors above world market levels. While these policies often serve social aims, they introduce friction that prevents prices from falling to the lowest possible level. A **frictionless, truly free global market** – albeit an idealization – would strip away many of these artificial supports, resulting in cheaper end-user prices but with painful adjustments for some incumbents.

In summary, **financialization has introduced a "tax" on productivity gains**, siphoning off the benefits of technology into profits, interest payments, and rents rather than passing them to consumers as lower prices. The hypothesis holds that if we remove or reduce these frictions, deflationary forces would dominate. The next sections examine specific service domains where this dynamic is evident, quantifying the gap between what *could* be (in a frictionless world) and what *is* today.

Case Studies: Services Ripe for Cost Disruption

Healthcare Services

Healthcare is a sector infamous for runaway costs, especially in countries like the United States – yet it is also rife with inefficiencies and ripe for technology-driven disruption. A landmark analysis by PricewaterhouseCoopers estimated that **about 50% of U.S. healthcare spending is "non–value added**

waste" [17]. In other words, roughly half of what is spent adds no real health benefit – it is pure friction, from administrative bloat to unnecessary services and inflated pricing. If those trillions of dollars of waste were eliminated, healthcare costs could theoretically be cut in half *without harming outcomes*. Indeed, healthcare experts have called the system *"a tapeworm on the economy"*, suggesting enormous savings are possible [18].

Technology's deflationary promise in healthcare is multifaceted: telemedicine can bring basic consultations to patients at negligible cost, AI diagnostic tools can reduce the need for expensive specialist visits, and electronic records plus automation can streamline administration. There are already signs of these forces at work. Retail clinics and telehealth visits are often *far cheaper* than traditional doctor visits and save patient time as well [19]. For example, an AI-driven symptom checker or a telehealth consult for common ailments can be delivered for a few dollars – as opposed to hundreds of dollars for an ER visit or clinic appointment. Remote patient monitoring and health apps can prevent costly hospitalizations by managing conditions at home. Moreover, pharmaceuticals and therapies, once off-patent, can be mass-produced very cheaply (generic drug manufacturing costs are often pennies per pill).

Yet, despite these possibilities, healthcare costs keep climbing rather than plummeting. The friction comes from the entrenched industry structure and financial incentives. We've already noted how middlemen markups and lack of transparency allow drug prices to be many-fold higher than production cost [12]. Another friction is the fee-for-service model and insurance complexity, which reward volume of procedures over value. This leads to administrative overhead (billing, coding, insurance claims) absorbing an estimated **25–30%** of U.S. healthcare spending – overhead largely absent in a frictionless cash-priced system. Additionally, consolidation in healthcare (hospital monopolies in local markets) gives providers power to demand high prices. In some cities, one hospital system can dictate prices because patients have no alternative; such pricing would be impossible in a fully competitive market.

The role of **financial investors** has grown too: private equity now owns thousands of physician practices and hospitals. As mentioned, private equity-owned providers tend to charge more – one study found 7–16% higher hospital prices after acquisition [20] – and may even cut staffing or quality to improve the bottom line [21] [16]. These practices explicitly prioritize financial return, creating friction against cost-lowering innovations. A hospital focused on maximizing revenue is less likely to, say, invest in a free AI triage nurse chatbot that could reduce clinic visits, because that innovation, while good for patients, might reduce billable services.

Despite these frictions, *change is brewing*: innovators are targeting healthcare's inefficiencies with deflationary models. Telehealth services offered by startups and pharmacies are undercutting traditional clinics on price. Some primary care practices are switching to subscription models (e.g. $30–$50 per month for unlimited basic care), cutting out insurance overhead entirely. AI-based health apps like symptom-checkers, mental health chatbots, and chronic disease coaches are often available for **$0–$20 per month**, a negligible cost compared to typical in-person care. For mental health in particular, which the user highlighted, AI therapy apps are drastically cheaper than human therapy. Traditional therapy might cost $150–$300 per hour, making it inaccessible for many; by contrast, **AI-driven therapy platforms offer services for around $20 per month** [22], providing daily support and cognitive-behavioral exercises at the cost of a few coffees. As of 2025, several AI therapy chatbots (Replika, Wysa, Youper, etc.) even have free tiers or <$10/month premium tiers [23]. While not a full replacement for human therapists in severe cases, these tools significantly lower the entry cost for mental wellness support. This **20x–100x cost reduction** exemplifies what frictionless technology can achieve.

Another area is pharmaceuticals: initiatives like Mark Cuban's Cost Plus Drugs are exposing how cheaply many medicines can be sold while still making a profit. Cost Plus publishes its prices transparently (cost of manufacture +15% markup + small pharmacy fee). The result: common generics that might retail for $20, $50, or more under traditional pharmacy/PBM pricing can be bought for just $3 or $5 through the Cost Plus model [13] [12]. For instance, the leukemia drug imatinib (generic for Gleevec) has a retail price around $2,500 for 30 pills in the U.S., but Cost Plus offers it for $14 per month in 2022 [13] – illustrating the astonishing gap between friction-full and frictionless pricing. Even life-saving **insulin**, which famously was inflating at 10–20% per year in the 2010s, costs under $10 per vial to produce yet was priced over $300 per vial in the U.S. until very recently [24]. Policy changes in 2023–2024 (including an insulin price cap and manufacturer price cuts) have finally begun to bring those prices down by force, but a frictionless competitive market would likely have done so long ago without needing government intervention.

Looking ahead to 2030, the healthcare sector holds perhaps the greatest potential for deflationary change – *if* frictions can be overcome. Technologies on the horizon, like advanced AI diagnostics, could cut diagnostic costs by an order of magnitude (for example, an AI that reads X-rays or MRIs in seconds for a few cents of electricity, versus a radiologist's $100 fee). Personalized medicine and 3D-printed drugs could eventually reduce drug manufacturing costs further. Reports by consulting firms and the World Economic Forum predict AI and automation *could save hundreds of billions of dollars* in health costs annually by 2030 [25] [26]. For patients globally, this would mean far cheaper care – *if* the health sector's business model evolves to embrace those savings. A frictionless, patient-centric model of healthcare would redirect the system to delivering value efficiently: minimal administration, transparent pricing, competition on outcomes, and heavy use of low-cost digital health solutions. The difference in cost to consumers could be striking. For example, a routine telehealth check-up could cost $5 instead of $150, or a year's supply of generic medications could cost $50 instead of $5,000. The capability for such deflation is real; the challenge is mostly breaking the grip of legacy financialized structures on healthcare.

Education Services

Education is another service domain where costs have surged in recent decades, even as technology promised to cut them. Traditional higher education, in particular, has become dramatically more expensive: **college tuition has risen nearly 180% in the past 20 years (inflation-adjusted)**, far outpacing general inflation [27] [28]. This steep rise occurred despite the advent of online learning, digital textbooks, and other cost-saving technologies. A university degree that cost $20,000 per year in the early 2000s might cost $50,000 or more today. By contrast, one might expect that with internet resources, the *effective* cost of educating a student should have decreased – after all, online delivery can scale instruction to thousands of students at low incremental cost, and digital materials can be replicated for free.

The discrepancy again highlights friction and financialization. Universities have faced reductions in public funding and responded by raising tuition to sustain their budgets [29]. They also engaged in an amenities "arms race" and administrative bloat, driving costs higher rather than lower. Crucially, the widespread availability of student loans and financial aid (much of it financed by governments or banks) has enabled colleges to keep increasing tuition – a phenomenon known as the **Bennett hypothesis**, which suggests that **expanded financial aid leads to higher tuition prices** [29]. Essentially, easy financing (students borrowing freely) allowed prices to decouple from actual instructional costs, an analog of how easy credit fueled housing price inflation. This is a form of financialization of education: education became an investment product financed through debt, rather than a service priced by market supply-demand alone. In a frictionless model where students had to pay education costs upfront (or where cheaper alternatives were

recognized as equivalent), traditional universities would have faced far more pressure to contain costs or lose students to more affordable options.

On the other side, technology has indeed created ultra-low-cost educational opportunities: **Open online courses and MOOCs** are often free or very cheap, and many are offered by top universities. The marginal cost of adding one more student to an online class is almost zero [4] – the lectures are pre-recorded, and even grading can be automated or peer-managed in large courses. Platforms like Khan Academy, Coursera, edX, and Udemy have millions of users learning coding, math, languages, and more for little or no cost. In theory, someone can acquire knowledge equivalent to a bachelor's degree using free online resources and a $50/month internet connection. This is the frictionless ideal for education: *near-zero marginal cost and near-universal access*. Wikipedia is another powerful example – it made knowledge accessible for free to the world, essentially eliminating the need to buy encyclopedias or reference books.

Why, then, do students still pay tens of thousands of dollars for formal education? The answer lies in the *credentialing, accreditation, and perceived value* of traditional degrees – essentially, the **brand and network effect** of established institutions. This acts as a friction that technology alone can't erase: employers still largely require accredited degrees, and elite universities still command prestige that translates into high tuition. Additionally, completion rates for free online courses are low (around 10%), and students often need interaction and support that pure online platforms struggle to provide. However, hybrid models are emerging: universities are partnering with online platforms to offer lower-cost remote degrees, and some companies are accepting alternative credentials (like Google Career Certificates or coding bootcamp certificates) in lieu of a college degree. As these alternatives gain legitimacy, the monopoly of the traditional higher-ed model weakens, forcing competition on price.

By 2030, we could see a significant realignment. If friction is reduced – for example, if employers increasingly hire based on skills tests or micro-credentials rather than just degrees – the demand for exorbitant college programs may decline, pressuring institutions to either lower prices or demonstrate clear added value. There are already signs of change: overall college enrollment in the U.S. has been declining in recent years, and tuition increases have actually slowed since 2020 [27] [30]. Some private colleges with small endowments are even cutting tuition or closing due to lack of demand, while big state schools experiment with offering 3-year degrees or fully online programs at a fraction of on-campus costs.

In a frictionless education economy, one can imagine **subscription models for learning** (all-you-can-learn for $100/month, for instance) or **income-share agreements** where students pay a small percentage of future income rather than upfront tuition – aligning incentives for schools to keep costs low and training effective. Educational content itself is trending toward free: prestigious universities have put entire courses online for free (MIT's OpenCourseWare started this trend in 2002), and YouTube hosts countless lectures. The remaining costs are mostly in providing structure, guidance, and credentials – all areas that could be optimized and scaled with technology (e.g. AI tutors, automated assessments, and blockchain-based credential verification).

By 2030, a student anywhere in the world with an internet connection could have access to the *equivalent* of an Ivy League curriculum for near zero cost. The friction to overcome is ensuring that this learning is recognized and can be translated into employment. If that piece is solved (through industry certifications, etc.), the economic floodgates would open: traditional educational institutions would either have to slash prices or specialize in the kind of in-person experiences and networking that justify a premium. Many middle-tier universities might not survive such competition, which is a disruption we are already starting to

witness. But from the perspective of society and students, a deflationary outcome – **high-quality education at a tiny fraction of today's cost** – is entirely achievable with existing technology. It is likely the financial and institutional inertia that will determine how quickly we get there.

Transportation and Other Services

Beyond healthcare and education, numerous other services stand to benefit from frictionless cost reduction. Transportation is a salient example raised in the prompt: personal vehicles and mobility. Despite manufacturing automation, globalized supply chains, and scale efficiencies, **new cars today are more expensive than ever** – the average new car in the U.S. sold for about **$48,000 in 2024** [31] [32], a record high, even as technology has improved. Part of this is due to cars being loaded with more features and the shift to SUVs, but even entry-level cars have crept up in price. Meanwhile, in a frictionless scenario, one could envision a safe, basic new car for well under $10,000 given what we know about production costs in lower-cost markets.

Wuling Hongguang Mini EV, a popular Chinese micro-EV priced around $5,000, exemplifies how basic functional cars can be made very affordable. In frictionless global competition, such ultra-low-cost vehicles highlight the deflationary potential in transportation.

There are indeed places where inexpensive cars are reality. In India and parts of Asia, you can buy a brand new no-frills car or micro-EV for the equivalent of $5,000–$7,000. For example, the **Maruti Suzuki Alto** (a basic hatchback in India) starts at around **$5,800** for the base model [33], and the **Tata Tiago** (slightly larger) starts around **$6,770** [34]. Even a small EV – the **Wuling Mini EV** in China – costs only about **$4,700** brand new [35]. These cars are spartan and meet minimal safety standards, but they do provide functional transportation. The existence of these products proves that the material and manufacturing cost of a simple car can be in the single-digit thousands. However, such cars are not sold in Western markets due to different safety regulations, consumer expectations, and perhaps protectionist policies or market positioning by automakers. Western consumers also tend to demand more features, and automakers have shifted focus to higher-margin vehicles. This is a friction of *product segmentation*: companies deliberately not offering the absolute cheapest product, because it may cannibalize higher-margin offerings or not align with brand strategy. In a frictionless market serving price-sensitive consumers globally, we might see a proliferation of ultra-basic vehicles (including electric scooters, etc.) that dramatically lower the cost of mobility.

Looking ahead, technology might deliver an even greater leap: **autonomous electric vehicles** could enable Transportation-as-a-Service at very low cost. Some analysts predict that by late 2020s, if self-driving robotaxis become viable, the cost per mile of a ride could drop to a few cents, undercutting car ownership and conventional taxis/buses. This would effectively make urban transport *deflationary*: instead of spending $500 a month on car payments, insurance, and fuel, a person might spend only $50 a month on autonomous ride-hailing for all their local travel needs. This scenario hinges on removing regulatory friction and achieving safe autonomy, but it illustrates how technology can radically reshape cost structures.

Other services to consider include **financial services** themselves (banking, payments). Here, fintech and cryptocurrencies promised to reduce fees and friction – for example, digital wallets enabling free person-to-person transfers, or decentralized finance offering loans at better rates. While there has been progress (many people can now send money instantly at no cost via apps), traditional finance still extracts fees (credit card processing 2-3%, bank wire fees, etc.). Blockchain enthusiasts often note that sending any amount of

money across the world can cost only a few cents in miner fees on certain networks, whereas legacy systems would charge significantly more. The friction here is partly regulatory (KYC, AML rules add compliance costs) and partly the incumbent firms' business models.

Legal services are another high-cost area: hiring a lawyer is expensive, yet we now have AI that can draft contracts, review documents, or even provide basic legal advice. By 2030, AI legal assistants could make routine legal services almost free (you might pay a $20/month subscription for an AI that handles tenancy agreements, wills, simple disputes, etc.). The friction will be in the acceptance and regulation of such AI outputs, and incumbent law firms' influence.

Energy is a sector undergoing a deflationary shift thanks to technology: the cost of solar power and batteries has plummeted over the last decade. In some regions, solar and wind are now the cheapest sources of new electricity (cheaper than coal or gas). One could imagine nearly free electricity in the future on very sunny or windy days if storage improves. However, consumers often still pay high fixed costs, and utilities structure rates to recoup investments, so the benefits of ultra-cheap generation are not always evident in bills. Policy and market design will determine if energy's tech deflation translates to consumer deflation.

In summary, many service sectors have a similar story: **technological capability exists to drastically cut costs**, but various frictions keep prices elevated. Removing these frictions can unlock huge consumer surplus. For instance:

- A frictionless scenario of abundant cheap energy + autonomous transport + efficient housing construction could vastly lower the cost of living by 2030 (imagine spending *half* of what you do today on rent, power, transport).
- Conversely, if financialization continues to dominate (e.g. investors buying up housing stock, keeping rents high; automakers focusing on luxury EVs; utilities adding extra fees), then even with better technology, people might continue to face high costs.

The next section will explicitly focus on this tension as we project from the current state (2025) towards 2030.

Global Perspective: Inflation vs. Deflation Around the World

It's important to note that the frictionless vs. financialized dynamic plays out differently across countries. The recent bout of inflation (2021–2023) was a *global* phenomenon – most countries saw prices rise due to a mix of supply shocks, monetary policy, and corporate behaviors. However, the degree varied. For example, the Eurozone and UK experienced energy-driven inflation and also noted instances of profit-driven price hikes (as discussed with "greedflation" in the UK) [9]. Emerging markets often had it worse, with higher food and fuel inflation impacting consumers severely (partly because a larger share of income goes to basics, and currency devaluation in some cases). In some developing countries, however, technological leapfrogging is delivering frictionless benefits more directly. For instance, **mobile banking in Africa** (M-Pesa and others) drastically cut transaction costs for people with no access to traditional banks – a deflationary boost in financial services. Telemedicine is being used to extend healthcare to rural areas in India and sub-Saharan Africa at low cost per consultation. These examples show that when there is no entrenched legacy system, tech can directly bring cost down to near the marginal level.

Global competition can also exert deflationary pressure. When China became the "world's factory," manufacturing goods prices stagnated or fell worldwide for years (the so-called China import price effect). Now, as China and other countries innovate in technology (like producing $5,000 EVs or cheap electronics), they potentially export deflation to markets that allow those imports. However, in recent years there's been a shift to "de-globalization" or reshoring, partly for resilience and partly due to geopolitical tension. If globalization stalls, one frictionless force (global price convergence at the lowest level) is weakened.

Demographics also matter: aging populations in Europe, Japan, and China are inherently deflationary (older people spend less and save more). Indeed, Japan has been a unique case – it experienced deflation or zero inflation for decades since the 1990s. In Japan's economy, strong deflationary forces (demographics, efficiency, conservative spending habits) were so persistent that even 0% inflation was hard to achieve. Japan had lots of technology adoption as well, yet due to certain financial frictions (zombie companies, high public debt) and its unique context, it didn't boom economically – but it also didn't see prices rise. This goes to show that technology's impact can be moderated by cultural and policy factors. The Japanese consumer benefitted from stable or falling prices (one could argue living standards quietly rose as gadgets got cheaper and food stayed the same price), but Japan also struggled with slow growth. Central banks fear deflation because in an indebted economy, deflation makes debts harder to pay. Hence policy is always biased towards inflation.

Developing countries until recently often struggled with inflation due to weaker financial systems and supply issues. But imagine if frictionless technology fully takes hold by 2030: a farmer in a developing country could have solar panels powering his farm (no fuel costs), using an affordable smartphone to get free expert advice on crops, and maybe a self-driving electric truck pooling service to bring produce to market at low cost. These changes would reduce his costs and potentially prices for consumers. It sounds utopian, but elements of this are plausible with the convergence of renewable energy, AI, and autonomous tech – *if* those tools are made accessible (which requires investment and lower cost hardware).

One cannot ignore that **policy and political will** are crucial in determining the friction. Some nations might proactively remove frictions – e.g., enforce antitrust to break monopolies, regulate for price transparency, invest in public options (like public broadband or education) that force private players to cut costs. Others might double down on protecting industries or financial interests, which would keep prices higher. For example, if a government subsidizes a high-cost service instead of promoting a lower-cost disruptive alternative, that could inadvertently maintain the cost structure.

The global focus as of *now* (2025) is on taming the high inflation that erupted after the pandemic. Central banks are raising interest rates to cool demand, which in effect tries to *force* some friction (by making credit more expensive) to counteract the prior oversupply of credit. Some of that inflation is indeed receding. But the big picture is that by 2030, many expect a return to the low-inflation environment of the 2010s, largely because the underlying deflationary pressures – **technology and globalization (or at least global competition)** – are still present. ARK Invest's Cathie Wood, for instance, has argued that **deflationary forces from innovation are building** and that we could even see outright negative inflation (deflation) in the coming years [36]. She cites trends like AI, robotics, DNA sequencing, etc., which *lower costs* significantly in their industries, and she believes these will overtake the temporary inflationary shocks. Supporting this, reports have shown recent easing of supply chain constraints and commodity prices, suggesting the 2021–2022 inflation was an anomaly. If correct, then the period to 2030 may be characterized by disinflation or deflation, *unless* policy or market power prevents it.

In essence, on a global scale, the fight between frictionless deflation and financialized inflation will continue. Different countries will lean one way or the other. It will be instructive to watch, for example, if Europe enacts windfall taxes or price controls to curb "greedflation" – a move that could reduce friction by discouraging profit-led price hikes. Or whether China, with its push for common prosperity, manages to lower the cost of housing and education domestically via policy (China has very expensive housing in big cities due to financial speculation – an example of friction that they are trying to mitigate). The global narrative by 2030 could well be that those countries which embraced competition and tech disruption saw cheaper services and happier consumers, while those that sheltered incumbents or relied on financial engineering struggled with higher living costs and public discontent.

Outlook 2025–2030: Toward Deflation or More of the Same?

As of now, we "*should already be in a deflationary world*" if the full effects of current technology were realized – that is the core premise we've explored. By 2030, will we get closer to that frictionless ideal, or will inflationary frictions persist? Based on current trends, we can outline two contrasting scenarios for the next 5–7 years:

1. Deflationary Boom (Frictionless Economy Emerges): In this optimistic scenario, the convergence of advanced technology and competitive market dynamics brings about noticeable price declines in various sectors by 2030. AI and automation achieve broad adoption, significantly lowering business costs. New entrants (startups or policy-backed disruptors) use these technologies to undercut incumbents – for example, an AI-powered telehealth service offers 24/7 medical advice for $10/month globally, forcing healthcare providers to lower fees. Governments encourage this by updating regulations (e.g. approving AI diagnostics, allowing online universities accreditation, enforcing open data in healthcare to reduce duplication). Antitrust actions and open-platform standards break up some monopolistic structures – perhaps we see more open-source pharmaceuticals, or big tech companies forced to allow competition on their app stores, reducing the "app tax." Consumers increasingly gravitate to lowest-cost providers as inflation expectations flip to expectations of stable or falling prices (imagine people waiting for next year's even cheaper EV or gadget, a mindset shift). Productivity gains finally translate to real wage increases (because when essentials cost less, real income effectively rises). In this world, by 2030 you might have scenarios like:

- **Transport:** Abundant electric minibuses and robotaxis in cities cut commuting costs by 50%. Personal car ownership declines, and carmakers pivot to producing smaller, cheaper EVs for sharing fleets. A basic new vehicle (perhaps a smart microcar) is available for, say, $7,000 globally as a result of scaled-up battery production and simpler designs, fulfilling the vision of a truly affordable car.

- **Energy:** Renewable energy plus storage becomes so cheap that electricity rates fall or even some utilities adopt "free nights" or negative pricing at times of surplus. Overall household energy bills drop significantly compared to 2020 levels, especially as home solar spreads.

- **Communication and Data:** The cost of mobile data and internet access keeps dropping worldwide as satellite internet constellations and 5G/6G competition expand coverage. By 2030, nearly the entire world could be online, and maybe at a flat very low fee (some predict that connectivity could become like a basic utility, subsidized or provided at near-cost).

- **Food and Goods:** Advances in agriculture tech (e.g. vertical farming, lab-grown meat at scale) could start to make some food products cheaper, although this is less certain within 5 years. What is more likely is more efficient logistics and less waste due to AI planning, which could trim food prices or at least keep them stable.

- **Healthcare & Education:** As we discussed, perhaps the biggest visible change could be in health and education costs. By 2030, if telehealth and AI diagnosis are mainstream, outpatient care costs could flatten or fall. If a "Healthcare-as-a-Service" model emerges (some call it Health 2.0), you might pay a small monthly fee for holistic digital health monitoring and only occasional need for doctors. For education, by 2030 many top universities might offer low-cost online degrees worldwide, competing with each other on price and quality, which could bring down the average cost of obtaining a credential. Corporate training and continuous learning could mostly be done through inexpensive online platforms rather than expensive seminars.

In this scenario, overall inflation rates in advanced economies could hover around 0% or even dip negative in some years – essentially benign deflation. Crucially, this deflation would be driven by *abundance and efficiency*, not by demand collapse, so it might coexist with decent economic growth (sometimes called a "deflationary boom"). Consumers would see their purchasing power rising. Businesses in innovative sectors would still profit through volume and new markets even if unit prices drop. It's a rebalancing where the pie is more efficiently distributed.

2. Stagflationary or Inflationary Stasis (Frictions Persist): In the pessimistic scenario, the structural frictions prove hard to dislodge. Financial interests and incumbent firms continue to dominate policy and markets, using their power to maintain prices and margins. Technology is adopted, but its cost savings mainly go to boosting corporate profits, not lowering consumer prices. We've already seen an example of this in recent data: in 2022, profits contributed significantly to inflation [37] – companies simply took more per unit sold. This could continue. Private equity and corporations might further consolidate – for instance, big tech could acquire the leading AI startups, integrating AI in ways that improve their bottom line but not necessarily make products cheaper (they could use AI to cut costs internally but still charge consumers the same or more). Governments, facing high debt, might even prefer some inflation (inflation erodes debt value) and thus not act too strongly to prevent price hikes; central banks might tolerate above-target inflation if unemployment is low, etc.

Under this scenario, by 2030 life might not feel much cheaper than today, despite better technology. You might have an amazing AI assistant at work increasing productivity, but perhaps all that does is increase your company's profit, while your salary stays the same and your grocery and rent bills remain high. Inflation could moderate but stay, say, around 3–5% annually in many countries – enough to continually erode real income unless wages catch up. This would be a continuation of the pattern where gains are absorbed by capital owners. A telling statistic is that the top 1% or 5% have been accruing a larger share of wealth (Booth noted wealth concentration at 1920s levels [38]). If that trend holds, it implies frictions are channeling tech gains to a few rather than to broad price reduction or wage growth.

What kind of frictions could cause this stasis? Some examples: - **Regulatory capture:** Industries like pharmaceuticals or finance might use lobbying to fend off disruptive changes (e.g. strict regulations on telemedicine or AI diagnostics citing safety, which conveniently protect incumbents; or educational accreditation bodies not recognizing online credentials, forcing students into expensive colleges). - **New forms of rent extraction:** If physical goods become cheaper, maybe companies shift to subscription

models or locked ecosystems to make up the difference (we see this with printers being cheap but ink expensive, or cars being sold at a loss but requiring paid software features). That could maintain the cost to consumers. - **Supply bottlenecks in new tech:** It's also possible that adoption of some deflationary tech itself is slow or faces shortages – e.g., if the rare minerals for EV batteries or the chips for AI remain in short supply, their costs won't drop as expected and could even inflate, offsetting savings elsewhere. - **Monetary and fiscal policy:** Governments might continue high spending and relatively loose monetary policy to appease voters or stimulate growth, which could fuel moderate inflation persistently. For instance, large green investment programs or social spending (while beneficial) could have the side effect of keeping demand high and prices from falling.

In such a world, **inequality might worsen** (since those who can invest in assets or own companies reap tech benefits, while average consumers just pay the same or more). Social pressures would grow, possibly forcing policy shifts later on.

Between these scenarios, the likely reality will be a mix, varying by sector. We might see *healthcare costs finally plateau or decrease* (due to obvious inefficiency that become untenable), whereas *housing costs* might continue to rise if not enough is done to address supply constraints or speculation. Education might bifurcate – elite colleges still pricey, but alternatives flourishing at low cost. Technology goods themselves (electronics, appliances) will probably continue their long-term trend of improving value for money (deflation in quality-adjusted terms), as they have for decades.

One hopeful sign is that awareness of these issues is growing. Public and academic discourse has increasingly discussed concepts like *"abundance agenda"* or the idea that we should welcome good deflation. There is also a burgeoning movement for open-source and decentralized solutions that take power away from gatekeepers (from open-source software to decentralized finance to creative commons content) – all of which contribute to friction reduction. If these movements gain momentum, the 2020s could indeed usher in a new economic paradigm by 2030, where **deflation is not feared but managed** – meaning policymakers adjust to it (perhaps by shifting taxation to wealth and away from wages, or providing universal income as prices fall, etc.), and society refocuses on broad prosperity rather than GDP growth at all costs.

Conclusion

In closing, the research and analyses presented in this whitepaper strongly support the view that **the world has the tools to be significantly deflationary right now** – delivering more goods and services to more people at dramatically lower costs – but that this outcome is being held back by *imposed frictions*, chiefly stemming from financialization, market power concentration, and misaligned incentives. Sectors like healthcare and education illustrate the magnitude of unrealized deflation: up to half of healthcare spending is pure waste [17] and could be eliminated with efficient, tech-enabled care, and higher education could be provided at a fraction of today's cost thanks to digital platforms [4], yet prices remain high due to legacy structures and financing schemes [27]. Similar stories unfold in transportation, finance, energy, and beyond – in each case, technology has opened the door to abundance and cheap provision, but various forms of friction (regulatory, intermediary, or rent-seeking) keep the door partially shut.

The period from now until 2030 will be pivotal. If current high inflation has taught policymakers and consumers anything, it is to question why prices are so high to begin with. There is a growing realization that **not all inflation is a natural inevitability** – much of it can be attributed to choices in how we organize

our economies. As one UK report on 2022 inflation concluded, *"profiteering played a significant role in boosting prices"*, with a small number of firms leveraging their market power to drive inflation [9]. Recognizing this is the first step to change. We may see stronger antitrust enforcement, or pro-consumer regulations that promote transparency and competition (for example, bans on non-compete clauses, requirements to make repair parts available, caps on various junk fees) – all actions that reduce friction.

On the other hand, the forces of financialization are deeply entrenched. Global debt is at record highs, and entire industries revolve around extracting financial rents. Change threatens these interests. Thus, progress toward a frictionless, deflationary economy will likely be met with resistance and occur unevenly.

From a formal economic perspective, a deflationary era brought by productivity is not something to fear if handled correctly – it would mean a higher standard of living (your money goes further) and potentially a more sustainable footprint (less resource use per unit output). The key is to ensure the benefits are broadly shared and that the transition is managed (debt burdens and expectations will need adjustment). Our current systems – from central banking to corporate governance – were built for an inflationary, scarcity-driven world [2]. Adapting them to a world of potential abundance is the challenge of our time.

In summary, **we stand at a crossroads**. Down one path, we remove friction and enter a new age of affordable abundance, where cars, healthcare, education, and more cost a fraction of what they used to, and human creativity and wellbeing can flourish freed from artificial scarcity. Down the other path, we cling to the old models, and technology's gains continue to pool at the top while the majority see stagnant living standards or only modest improvements. The research leans toward the former being not only possible but *desirable* for global society. Achieving it, however, will require conscious effort to identify and break the frictions – to truly make markets as frictionless as the textbooks imagine, and to restructure financial incentives to prioritize long-term shared prosperity over short-term profit extraction.

As a formal conclusion, this deep research confirms the hypothesis that **imposed frictions, especially via financialization, are the primary barrier between us and a deflationary world** of cheap, high-quality services. The period to 2030 is likely to witness significant tension – and perhaps resolution – between these opposing forces. Keeping the focus on innovation, fairness, and openness can tilt the balance toward a frictionless economy. If successful, by 2030 we may look around and marvel that we once paid $200 for a simple doctor visit or $50,000 for an education that is now virtually free. The deflationary future is there for the taking; it remains for policymakers, businesses, and consumers to decide how quickly we embrace it and dismantle the frictions that have been holding it back.

Sources: Recent studies, industry reports, and expert analyses were cited throughout this report to substantiate the findings and projections. Key references include evidence of waste and potential savings in healthcare [39] [14], analyses of profit-driven inflation in 2022 [9] [11], data on education cost inflation versus online learning costs [27] [4], and expert commentary on technology's deflationary impact and the credit-fueled inflationary counterforces [1] [3], among others. These sources collectively reinforce the narrative that the current inflationary environment is not a failure of technology, but a result of economic frictions – and that removing these frictions could usher in a new deflationary era of widespread prosperity.

1 2 3 38 Stopping Technological Deflation is Making the World a Very Dangerous Place | by Jeff Booth | Medium
https://medium.com/@JeffBooth/stopping-technological-deflation-is-making-the-world-a-very-dangerous-place-71e8a579c6e5

4 Are the Costs of 'Free' Too High in Online Education? – Communications of the ACM
https://cacm.acm.org/opinion/are-the-costs-of-free-too-high-in-online-education/

5 "The Price Of Tomorrow" by Jeff Booth - Book Review - Forbes
https://www.forbes.com/sites/calumchace/2020/08/18/the-price-of-tomorrow-by-jeff-boothbook-review/

6 Would the natural state of the US economy be deflationary? - Reddit
https://www.reddit.com/r/AskEconomics/comments/1ey04i3/would_the_natural_state_of_the_us_economy_be/

7 Global debt marches to record high, raising risk of bond vigilantes, IIF says | Reuters
https://www.reuters.com/markets/rates-bonds/global-debt-marches-record-high-raising-risk-bond-vigilantes-iif-says-2025-02-25/

8 9 10 11 37 Greedflation: corporate profiteering 'significantly' boosted global prices, study shows | Inflation | The Guardian
https://www.theguardian.com/business/2023/dec/07/greedflation-corporate-profiteering-boosted-global-prices-study

12 13 Op-Ed: Will Mark Cuban's pharmacy lower drug prices? - Los Angeles Times
https://www.latimes.com/opinion/story/2022-07-11/drug-prices-mark-cuban-pharmacy

14 15 16 20 21 How Private Equity Deals Are Reshaping Your Health Care | Commonwealth Fund
https://www.commonwealthfund.org/publications/podcast/2025/may/how-private-equity-deals-are-reshaping-your-health-care

17 18 19 39 Disruptive and Delightful Deflationary Economics
https://www.linkedin.com/pulse/disruptive-delightful-deflationary-economics-dave-chase

22 23 Best AI Therapists in 2025: A Complete Guide to the Top Virtual Therapy Platforms
https://crowncounseling.com/reviews/best-ai-therapists/

24 Decoding Insulin Pricing Changes - - Innovative Rx Strategies
https://innovativerxstrategies.com/decoding-insulin-pricing-changes/

25 AI's US$ 868 billion healthcare revolution - Strategyand.pwc.com
https://www.strategyand.pwc.com/de/en/industries/pharma-life-sciences/ai-healthcare-revolution.html

26 AI healthcare benefits - IBM
https://www.ibm.com/think/insights/ai-healthcare-benefits

27 28 29 30 How Much Has College Tuition Outpaced Inflation? | SoFi
https://www.sofi.com/learn/content/college-tuition-inflation/

31 32 Average Price of a New Car in 2025
https://www.moneygeek.com/resources/average-price-of-a-new-car/

33 34 35 5 Of The Cheapest Cars In The World (As Of 2024)
https://www.slashgear.com/1606696/cheapest-cars-in-the-world/

36 Cathie Wood says forget inflation, deflation is the real enemy after the Fed hiked rates too far, too fast ...Middle East
https://eng.pressbee.net/show2392344.html?title=cathie-wood-says-forget-inflation-deflation-is-the-real-enemy-aft