

**HIGHER PRICES: HOW SHRINKFLATION AND
TECHNOLOGY IMPACT CONSUMERS' FINANCES**

HEARING
BEFORE THE
COMMITTEE ON
BANKING, HOUSING, AND URBAN AFFAIRS
UNITED STATES SENATE
ONE HUNDRED EIGHTEENTH CONGRESS
SECOND SESSION
ON
EXAMINING HOW SHRINKFLATION AND TECHNOLOGY IMPACT
CONSUMERS' FINANCES

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HIGHER PRICES: HOW SHRINKFLATION AND TECHNOLOGY IMPACT CONSUMERS' FINANCES

THURSDAY, MAY 2, 2024

U.S. SENATE,
COMMITTEE ON BANKING, HOUSING, AND URBAN AFFAIRS,
Washington, DC.

The Committee met at 10 a.m., via Webex and in room 538, Dirksen Senate Office Building, Hon. Sherrod Brown, Chair of the Committee, presiding.

OPENING STATEMENT OF CHAIR SHERROD BROWN

Chair BROWN. The Banking, Housing, and Urban Affairs Committee will come to order.

Every time Ohioans go to the grocery store, they're paying for corporate stock buybacks and executive bonuses. Prices today are far too high. Families are having a hard time finding a fair price, seeing more of their paycheck vanish into thin air. I hear all the time from Ohioans justifiably angry that, when they buy groceries and other basic essentials, they're paying more than they did a few years ago.

All of this happens, while corporate profits hit record highs. Let's be clear, the fact that prices and corporate profits are going up at the same time is no coincidence. A study for the Kansas City Fed found that corporate profits drove half the price increases in 2021, and profits are still high today.

Of course, I want businesses to make money. I want American companies to be the most competitive and most profitable in the world. What I am against is corporate profiteering that funnels money from working people to executives in the form of massive bonuses and stock buybacks. I'm against markets that don't foster competition and low prices. I'm against market manipulation. A family walking into a restaurant or a store should not have to guess what they'll be charged. Someone shopping online should not be paying more for the exact same product because of their online search history.

Businesses should create new goods and services that Americans want to buy at prices justified by the cost. And workers, critical for the success of businesses, of course, should be paid fairly for helping the businesses succeed.

Instead, the same Wall Street business model that has kept wages low and executive compensations sky high for decades is now pushing prices up, too. Corporations use supply shocks from

the pandemic and the war in Ukraine as an excuse to raise prices, and they keep raising them. Be clear, they're not charging more because they're paying workers more. Wages are not causing price hikes. Corporations are raising prices far beyond their input costs and funnelling those profits to executives, not workers, just like they always do. They've realized when the market isn't free or fair, they can push prices up higher and higher.

And they're using tried-and-true technologies, new technology, to refine old ones, to charge those higher and higher prices, and get away with it. When they're talking to the Wall Street investors, they admit what they're doing. On an investor earnings call, one CEO of a major American company said, consumers are tolerating frequent price increases well. You hear that? Consumers are tolerating price increases.

I'm here to tell CEOs that working families cannot tolerate unfair price increases. Price gouging isn't new, but it's getting easier and easier to conceal.

By now, we've heard what the media dubs shrinkflation, where corporations shrink their products, but keep the prices the same, or even raise them. The rolls of toilet paper have fewer sheets, but they didn't lower the price. The package of Oreos has fewer cookies in it, but the price stays the same.

The trick isn't new, but it's getting worse. What's next? Will they shrink the amount of cream in the Oreo cookies? Will Double Stuff become half-stuffed?

Companies use advances in technology to find new methods of price gouging. They're now using new pricing strategies and data collection to charge more. They call these tactics dynamic pricing and personalized pricing algorithms. Dynamic pricing and personalized pricing, you know some corporate PR firm is really proud of those terms.

Customers don't want their pricing personalized. They want it to be fair. They want it to be transparent. They want it to be as low as possible. Gone are the days when Americans simply could walk into a store having a clear idea of what they are about to pay. It's not just the act of walking into a brick-and-mortar store that's nostalgic, it's the notion of predictable, transparent prices.

With online retailers, the price can change every day or even within the hour, sometimes dramatically. They spread the technique to brick-and-mortar stores, adding electronic menu boards to restaurants and digital price labels to shelves, so that corporations can raise the price at a moment's notice.

It's frustrating and it makes it impossible for people to compare prices and shop around, key ingredients in any fair, open market. Families with fixed budgets can't afford to walk into the grocery store, into a pharmacy, not knowing how far their paycheck will get them.

Big Tech has exported their data-mining business model to retailers, and that has made all of this even easier for companies. As more people shop online, retailers learn more about browsing and shopping habits all of us have by collecting every bit of our online data. They can charge you more based on your search history.

You start shopping around to try to find the lowest price on a new washing machine. Online retailers realize you're in the market for appliances and start showing you higher and higher prices.

Spying on people and charging them more for the products they need, it's not innovation, it's price gouging. Charging more for food during mealtime isn't the free market, it's exploitation.

The story is always the same, whether you use old tricks or new technologies, corporations win; the rest of us, typically, lose. That's not how free markets are supposed to work. It's why standing up to corporate interests matters.

And people hate Washington, people hate Washington because too many politicians in this town over and over and over do corporations' bidding.

It took us more than a decade of fighting the drug companies and their lobbyists and their allies in Congress to finally lower drug prices and to cap the cost of insulin at \$35 a month for seniors. Almost nothing we've done elicits the kind of reception that I get when I talk about lowering the price, capping the price of a prescription of insulin at \$35. Yet, look at how hard it was in this country because so many of my colleagues were doing the bidding of corporate interests, doing the bidding of Big Pharma, day after day, week after week, month after month, year after year. But consumers had a victory when we capped the price of insulin at \$35.

We need Members of Congress to grow spines and stand up to more of these corporate lobbyists. Senator Casey and I have a bill to crack down on companies shrinking their products and raising their prices by directing the FTC to label this what it really is, and that is a deceptive practice.

We need our colleagues to join us in efforts like this to lower prices and stop these tactics that distort the market, and stifle competition, and make it harder for Americans to afford the cost of living.

Thank you. Member Scott.

OPENING STATEMENT OF SENATOR TIM SCOTT

Senator SCOTT. Thank you, Mr. Chairman.

And thank you all for being here with us this morning.

Listening to our Chairman, Democrats would have Americans believe that the economic pain they're feeling is caused by greedy corporations putting a few less chips in your chip bag. It couldn't be more clear where the obvious pain is coming from. The obvious pain is coming from a guy who lives at 1600 Pennsylvania Avenue.

The bottom line is that President Biden and Bidenomics has devastated our economy and devastated people working paycheck to paycheck. The highest percentage of Americans with the fewest dollars in their savings account for an emergency is now because of President Biden and Democrats' reckless spending.

They like to name their bills in attractive ways, but the bottom line is a very simple thing: they all add to inflation, whether it's the American Rescue Plan, the Bipartisan Infrastructure Act, or the worst-named bill perhaps in American history, the Inflation Reduction Act.

Anyone who believes that inflation has gone down because of the Inflation Reduction Act, all you have to do is look at the latest in-

formation coming out of the Federal Reserve itself. Inflation continues to increase.

These bills used to be hailed positively as a part of Bidenomics, but now they're just economics, because no one can afford President Biden's approach to solving the problems that we see in our Nation.

And I know this to be true because it doesn't matter whether I'm at home in South Carolina or any other State around the country, I keep hearing the same things from consumers:

Rent is too high. I'll never be able to afford a mortgage.

I'm living paycheck to paycheck. My grocery bills are staggering, and I can barely afford them.

Or I spent my entire life working and building up enough savings just to retire, but now I'm worried that those savings won't go far enough and I'll have to go back to work.

Or I'm really worried about my finances and our economy.

And they always end with a simple question: What can you do to help me?

The number one concern, besides the devastation that Americans are experiencing because of the unsafe, insecure, wide-open southern border, the number one concern outside of the border is the economy.

And Americans across the country point their fingers at the devastation of inflation. Inflation today is costing the average American family an additional \$8,508 just to buy the same things they were able to buy before President Biden took office.

It is truly unfortunate that the Biden administration continues to play a game of deflection; not taking responsibility, not solving the problem, but looking for someone else to blame other than the man in the mirror.

First, the Biden administration told us that the challenges that we were seeing with inflation were transitory. I cannot tell you the number of hearings I sat through, whether it was Secretary Yellen or others, who said that this is transitory because of COVID.

Well, then they changed the story that it was a Putin's price hike because of the Russian invasion of Ukraine. And then, it was greedflation or shrinkflation, when the fact of the matter is simply Biden's inflation.

Here's the truth; the Biden administration's spending policies have caused the inflation that we're seeing and the economic devastation it is producing. They are the key contributors to the price hikes we are all experiencing today.

Let's take a step back to understand what inflation really feels like to the average American.

Prices across the board have certainly increased nearly 20 percent since Biden took office. Yes, a 20 percent increase in just over 3 years. For example, butter is up 27 percent; chicken, 26 percent; white bread, 30 percent.

When you go to the pump, you don't have to believe what President Biden says about the challenges. All you have to do is see the price at the pump, a 40 percent increase; energy costs, a 25 percent increase.

I could spend the rest of my time this morning discussing other examples of how much prices have increased, but the American

people know all too well that the challenges that they face and where it comes. That's why they trust him so little on the economy.

It is crystal clear. They know what they see with their own eyes. Yet, instead of looking at ways we can bring inflation down, this Administration continues to look for scapegoats, such as corporate America.

But here's what the Federal Reserve recently studied. The Federal Reserve studied the Administration's claims that corporations are driving up inflation and came to the conclusion, and I'll just read it, unprecedented large and direct Government intervention and accommodative monetary policy. Profits were back to their prepandemic levels by the end of 2022.

With respect to shrinkflation, the Biden administration's own BLS, Bureau of Labor Statistics, reported that its effects have resulted in a 0.01 percent average annual increase to prices and has a very small impact on the overall inflation picture.

I know this is really uncomfortable for some of you to listen to it. That's just called the facts.

What we should be talking about today is the direct harm this Administration's policies are causing as they continue to lead to more inflation.

We should be talking about the inflation spike we are likely to see after billions and billions of dollars in student loans are illegally forgiven by this Administration.

We should be talking about a Federal debt that is growing by trillions of dollars every single year.

The American people are smart. They see through this blatant attempt by this Administration to blame others for the inevitable results of their policies.

It's time for the Biden administration and their friends on the other side of the aisle to wake up and smell the coffee that now costs 30 percent more.

Out-of-control, reckless spending led to runaway inflation that has remained elevated for years now. We must all accept the fact and return to sound economic policies that make affording the basics just a bit easier for the American family.

With that, I yield back and look forward to asking some questions.

Chair BROWN. Thank you, Senator Scott.

We welcome the three witnesses to the Committee.

Mr. Bilal Baydoun is the Director of Policy and Research at Groundwork Collaborative. Mr. Baydoun has served as a senior advisor in several Government organizations, including the city of Dearborn, Michigan. He holds a master's in public policy from the University of Michigan.

Dr. Allison Schrager is a Senior Fellow at the Manhattan Institute. She's an economist and contributing editor at *City Journal*; cofounder of LifeCycle Finance Partners. Dr. Schrager earned her graduate degree from the University of Edinburgh and a Ph.D. in economics from Columbia University.

Dr. Schrager, welcome.

Dr. Alí Bustamante is the Director of the Worker Power and Economic Security Program with the Roosevelt Institute. Dr. Bustamante is an expert in labor, economics, and public policy.

Prior to joining Roosevelt, he served as Chief Economist at the Louisiana Workforce Commission. He received his BA and Ph.D. from the University of Miami.

Dr. Bustamante, welcome.

Mr. Baydoun, please begin.

STATEMENT OF BILAL BAYDOUN, DIRECTOR OF POLICY AND RESEARCH, GROUNDWORK COLLABORATIVE

Mr. BAYDOUN. Thank you, Senator. Chairman Brown, Ranking Member Scott, Members of the Committee, thank you for the opportunity to testify today.

My name is Bilal Baydoun. I'm the Director of Policy and Research at the Groundwork Collaborative, an economic think tank based here in Washington.

The modern price tag was invented by John Wanamaker of Philadelphia, a devout Presbyterian who believed that, if we were equal before God, we ought to be equal before price. And so, from the very beginning, the price tag was infused with a sense of fairness and equality.

Yet, in America today, a fair price, let alone a sweet deal, is harder and harder to come by. In the age of corporate concentration and high-powered algorithms, pricing is in the midst of a troubling transformation, and the price tag as we know it may become a relic of the past.

Ride-share apps like Uber have reportedly charged users higher prices if their phone battery was lower. Insurance companies fly drones above our property in search of signs of clutter, and car companies install software that reports our driving behavior to insurance companies, who use the data to hike our rates.

Amazon, reportedly, changes prices millions of times per day, while running secret price-hiking experiments like Project Nessie that reaped \$1 billion in revenue.

Frustratingly, food delivery apps like Uber Eats show us one menu price upfront, only to tack on mysterious junk fees right at checkout.

In a practice known as shrinkflation, companies discretely reduce the size or volume of common household items, everything from jars of peanut butter to bars of soap, to charge consumers more for less.

All of these tactics converge on a single goal: find out the maximum price that individual consumers are willing to pay.

In competitive markets, companies often have to innovate, outwork the competition, and improve products and services in order to keep customers happy. But a perfect storm in our economy made it much easier for companies to simply price their way to record profits.

First, companies have gotten bigger. About three-quarters of domestic industries have become more concentrated and are dominated by fewer players than they were 20 years ago. This grants the remaining large firms the freedom to hike prices without fear of being undercut by the competition.

Second, pricing has gone high-tech. Technological advances, such as cloud computing, AI, and surveillance targeting have enabled

companies to collect reams of personal information on consumers and change prices in under a nanosecond.

These technologies help companies build profiles of individual customers that include things like our age, marital status, estimated salary, ethnicity, the magazines we read, and even the type of topics we discuss online.

Finally, market power and technological advances came together in the shadow of inflation, giving companies the cover to roll out pricing strategies once thought to be too risky, precisely because consumers dislike them.

But with prices rising everywhere, customers couldn't distinguish which hikes were due to rising costs and which were truly excessive. As a Barclay's executive told *Bloomberg* in 2022, quote, the longer inflation lasts and the more widespread it is, the more air cover it gives companies to raise prices. Unquote.

The complex algorithms entrusted with setting prices to maximize revenues have neither a conscience nor legal training, which is why algorithmic pricing can be both discriminatory and collusive. But we don't have to accept the end of a fair price as inevitable. We must continue to enforce current laws that outlaw collusion and unfair and deceptive practices, while also recognizing that algorithms can fix prices just as well as human agents can.

But new laws are also necessary. The Price Gouging Prevention Act, introduced in this chamber, would enable the Federal Trade Commission to enforce a Federal anti-price-gouging statute. Likewise, the Shrinkflation Prevention Act would classify shrinkflation as a deceptive practice and empower the FTC to take civil action on behalf of consumers.

We must also continue to eliminate junk fees and regulate complex pricing structures that push hidden fees on consumers. The Consumer Financial Protection Bureau's late fees rule demonstrates that policymakers can and must protect consumers from predatory fees. By capping late fees at \$8, the CFPB will save American families more than \$10 billion annually.

Finally, we can't allow companies to harvest our data and use it to price discriminate against us. Protecting data privacy, including transactions data, is essential to confronting this new pricing regime and ensuring companies cannot surveil consumers, while pushing arbitrary price hikes.

There's no doubt we have the tools to restore a fair price in America. We just have to use them.

Thank you, and I look forward to your questions.

Chair BROWN. Thank you, Mr. Baydoun. Dr. Schrager.

**STATEMENT OF ALLISON SCHRAGER, SENIOR FELLOW,
MANHATTAN INSTITUTE**

Ms. SCHRAGER. Chairman Brown, Ranking Member Scott, Members of the Committee, thank you for the invitation today.

I'm a Senior Fellow at the Manhattan Institute, where I research fiscal and monetary policy and financial markets. I am also a columnist at *Bloomberg Opinion*.

And the high-inflation environment we're in is a terrible economic burden for American households, especially those living pay-

check to paycheck or struggling to afford groceries, let alone enjoy the occasional meal out with their family.

And it's tempting to blame whoever raised the price we see, the firms we buy goods and services from, who appear to be getting rich off of our bills. But they are not at fault; they are merely reacting to the realities of the high uncertain inflation environment we are all facing.

In order to bring inflation down, we need to understand it, how it started, and why it persists. History has shown that misdiagnosing the problem, and then, implementing misguided policies will only create more harm for American households.

And my testimony explains how we got here and why inflation remains high. The main reason it's remaining high is we're still in an elevated, high-demand environment, and that is made worse by a stimulative fiscal policy. Inflation, though, cannot be blamed on greedy corporations.

First, there's no reason to think that corporations have just suddenly become greedy. It is natural to increase prices when you're facing a period of high demand.

Take the example of an umbrella salesman in the rain. It does feel really unfair that he raises his price when it rains, but if he didn't increase prices when it starts to sprinkle, there would be no umbrellas left when there was a downpour. Or if he can't make more money in the rain, why would he bother sitting in the rain himself and sell umbrellas?

We see a similar story playing out in markets today. Prices are increasing because demand is still high. We see consumer spending is still up. We see a rather very tight and vigorous labor market, and GDP, particularly around demand focusing, is still growing. And prices do rise when demand is high, and this price adjustment is how markets ration goods.

It is true that there was an increase in profits in 2021, when inflation first spiked, but profits peaked in 2021 and have since fallen and leveled off.

One way to understand what happened is that, initially, firms raised prices in response to increased demands and the limited supply coming out of the pandemic. But just like that umbrella salesman, they increased prices and reduced that higher demand.

Now, at first, the cost of their inputs did not go up as much, in part, because firms had existing contracts. But as time went on, they had to renegotiate those contracts and gave many of their employees raises, and then, profit margins declined.

So, in addition to just re-increasing prices, firms might, instead, just shrink the volume of the product they sell, but keep prices the same. Shrinkflation is like fewer potato chips in a bag. But this is just another way for firms to increase prices.

And again, I see why this is extremely frustrating to customers. They are getting less and paying more. But it is really just another way to pass along the high price increase of the sort of overall high-demand environment we have and rising input costs.

You know, whether or not increasing prices or increasing the volume of the goods is better, it really is sort of hard to say. But it's important to understand that sometimes just charging more reduces sort of more people from buying the good altogether.

Now, dynamic pricing is another way that you can increase prices. And this is just increasing prices for some consumers and not others, and particularly, consumers who are more willing and able to pay more. Wendy's recently attempted this when they floated the idea of charging more during peak times.

But an example of dynamic pricing that predates Wendy's is airlines. We've been living with their dynamic pricing for years. They charge more during peak times or they are now charging more for goods that used to be included in the price, like a checked bag or picking your seat.

Now, this is, again, consumers hate this because it feels unfair. But it's important to understand this actually is how airlines also deal with the pricing pressure from technology that enables consumers to look at goods, to use the internet to sort of price-comparison shop, which puts pricing pressure on airlines. And the result is that the cost of flying has gone down.

In the 1980s, only 30 percent of Americans had flown in the last year. Now, it is more like 50 percent, in large part because lower-income Americans do have a cheaper option, even if it means worse service.

And the same is true for Wendy's. If they would just increase prices across the board, then fewer people would be able to go to Wendy's. And we can expect more of this. And in fact, research shows that a lot of the same technology that enables price discrimination has also created a more inclusive market and had some deflationary pressure on prices before the pandemic.

So, I understand why this high-pricing environment is causing frustration for consumers. It causes frustration for me, too. But this is, again, the result of the high-demand environment we're in, and that is largely made worse by sort of stimulative fiscal policies that are still piling on, adding fuel to the fire to this high-demand environment.

Past attempts from companies raising prices—if we choose the wrong solutions, such as price controls, those have proven counterproductive in the past. They create shortages. They reduce incentives to sell and produce, and they can worsen inflation.

The best way to fix this is not to undermine the Fed's attempts to control inflation; pull back on spending; stop handouts, especially to high-earners who don't need them, and try to reduce the debt.

Chair BROWN. Thank you, Dr. Schrager. Dr. Bustamante, welcome.

STATEMENT OF ALÍ R. BUSTAMANTE PROFESSOR OF PRACTICE, UNIVERSITY OF NEW ORLEANS DEPARTMENT OF ECONOMICS AND FINANCE, AND DIRECTOR, WORKER POWER AND ECONOMIC SECURITY PROGRAM, ROOSEVELT INSTITUTE

Mr. BUSTAMANTE. Chairman Brown, Ranking Member Scott, and honourable Members of the Committee, thank you for inviting me to speak on the pressing issues surrounding how corporate pricing strategies are impacting prices and their implications for consumer finances.

In my testimony I will make three points.

One, inflation is being driven, in part, by corporate profiteering related to firms' price-setting power.

Second, corporate profiteering is harming consumers, workers, and small businesses.

And three, Government has tools that can restrict corporate profiteering and protect consumers and small businesses.

First, there is evidence that large corporations are engaging in pricing strategies that are contributing to elevated prices. Research conducted by my colleagues and I at the Roosevelt Institute has found that a recent sharp rise in markups by large corporations is contributing to inflation. Markups are the difference between the prices consumers pay for goods or services and how much it costs to make or provide them. Markups are low in competitive markets. But, as corporations have accumulated significant market power over the years, they have been able to increase prices without sacrificing profit. Our research finds average markups grew from 48 percent above cost in 2014 to 69 percent above cost in 2023, and that is growth that is being driven by a few large corporations.

For consumers, markups can take several forms through various pricing strategies employed by corporations.

Standard retail markup. This is the most straightforward markup where sellers add a percentage to the cost of goods and services to generate profit.

Shrinkflation. Reducing the quantity or size of a product while maintaining or increasing its price.

Dynamic pricing. A method of price discrimination whereby prices adjust in real time using pricing algorithms and sophisticated consumer data, often with new artificial intelligence methods.

Decoy pricing. Pricing structures where firms introduce a third, less attractive option to lead consumers to choose a more expensive option than they originally might have.

Bundling. Bundling products together to sell them at a price that seems to offer a savings compared to buying each item individually, but that often includes a markup.

Markups, and the sophisticated pricing strategies that are driving them, are on the rise because of large corporations' outsized market power. Research finds that smaller firms in less consolidated industries have not driven explicit markup growth.

Take the fast-food industry, for example. My recent research of markups finds that the average markup in the fast-food industry grew by 14.7 percent during the past decade. When analyzing markups at the 10 largest fast-food firms in 2023, we found that they were the highest at Wendy's, McDonald's, and Restaurant Brands International, the parent company of Burger King and Popeyes. At these firms, prices were between 80 and 91 percent above companies' marginal costs. These large companies are charging consumers above and beyond what is necessary for typical profit margins.

Second, there is ample evidence that markups and corporate profiteering in general by large corporations are harming consumers, workers, and small businesses.

Consumer surplus, how economists measure the social/economic benefits of consumption, would have been 14 percent higher in 2019 if markups had remained stable at 2006 levels and 50 percent

higher if firms passed along the reductions in their costs over that period to consumers. This hits low-income consumers the hardest, as their disposable income is stretched even thinner, forcing them to make difficult decisions about the basic necessities and bills they need to cover.

Workers are also being squeezed. Research shows that increases in markups lead to a decline in wages of approximately 12 percent, because markups lead to a reduction in the aggregate demand for labor. The harmful effect of markups on workers is also visible in the declining share of income going to workers. Rather than rewarding workers who drive productivity in the first place, these large corporations driving growth in markups are the same ones returning higher profits from markups to wealthy shareholders via stock buybacks and dividends.

Furthermore, markups reflect a winner-take-most economic environment where large corporations with price-setting power also have the capability to reduce competition by creating barriers to new firms to enter the market, crowd out smaller firms, and squeeze supplier margins in order to protect and expand their market share.

Lastly, I'd like to discuss the myriad of available Government tools that can restrict corporate profiteering and protect consumers, workers, and small businesses.

We need to enforce and strengthen antitrust laws to prevent monopolistic practices and ensure competitive markets, particularly in industries where a few companies control significant market share, leading to higher markups.

Policymakers can move to create guidelines and restrictions around the use of dynamic and personalized pricing to prevent unfair or deceptive practices by requiring businesses to fully disclose the pricing structure of their products and services. This would disincentivize corporations from enjoying these predatory pricing practices.

To improve fairness and transparency in pricing, administrative agencies like the Consumer Financial Protection Bureau can mandate clearer disclosure of pricing components and service fees and enforce rules against deceptive pricing practices or hidden fees. This is particularly impactful in sectors prone to higher markups, such as financial services and health care.

There are great economic benefits to be gained by reining in markups and unfair corporate pricing strategies, including lower prices in the short term and more competitive economic environment for business and workers in the medium and long term. Yet, inaction from both regulators and legislators will enable corporate profiteering that continues to elevate prices, harm consumers, and squeeze small businesses.

Thank you.

Chair BROWN. Thank you, Dr. Bustamante. And the question will go to Senator Tester of Montana.

Senator TESTER. Thank you, Mr. Chairman, for the courtesy.

And I want to thank you and the Ranking Member for holding this very important hearing.

And I appreciate the folks who gave their testimony.

I want to start with you, Dr. Bustamante.

I believe in capitalism. I think you've got to have competition in the marketplace. It keeps everybody honest—everybody honest.

I think what we've seen in many, many different sectors of our economy is way too much consolidation. I want to bring agriculture up as one. You know the statistics. Three-quarters of the global grain market is controlled by four traders. Eighty-two percent of the U.S. beef market is controlled by four packers.

I'm going to tell you, and I'm a farmer in my real life—that concentration prevents folks that are in production agriculture, family farmers, from being able to survive. And by the way, the statistics on the other end point that out. Eighty-five percent of farm income is going to 7 percent of the farms. Ninety-three percent of the farms in Montana, for example, share just 15 percent of the farm income. That's a system that, quite frankly, needs some attention. We're talking about consumers getting taken advantage of. We talk about producers of the food in this case getting taken advantage of.

Can you tell me if, and excuse me if I'm stepping out, but can you tell me if things like the Packers and Stockyards Act that was passed over 100 years ago, because the industry of meat packing was so consolidated, and today's it's even more consolidated than it was 100 years ago, is something that we should really focus on? Or is it a different issue than just making sure that people are following the antitrust laws that are out there?

Mr. BUSTAMANTE. Consolidation has been a huge issue driving markups and higher market concentration in so many industries. As you mentioned, when we think of meat and meat processing, the fact that cattle ranchers used to get about 67 percent of every dollar that consumers were paying, was actually going to them, now it's closer to 33 percent. And this is a huge red flag that meat packers are, basically, driving consumer prices, but actually not passing on those gains to cattle ranchers or to workers to begin with.

Senator TESTER. Yes.

Mr. BUSTAMANTE. And so, it's really being able to push back against consolidation, being able to push back against these large corporations that, ultimately, have so much market share that they're able to squeeze suppliers, consumers, and workers at the same time.

Senator TESTER. Well, thank you for that. Because you're spot on.

And I will tell you food security is really, really important in this country. And because there's just not enforcement of laws that have been on the books for 100 years, we're forcing more consolidation at the ground level. And I've said this and I mean this, if we lose family farm agriculture in this country, this country becomes far, far, far less secure. And so, I think Congress needs to pay attention to that.

And in that vein, I would tell you that Chairwoman Stabenow put out her farm bill yesterday, and in that she included a bill that I've been pushing for and that I've sponsored; the Meat and Poultry Special Investigator Act.

This is for you, Mr. Baydoun. You mentioned the negative impacts of consolidation, of reduced competition, however you want to put it, in your testimony. Could you flesh out a little more what increased competition and accountability, how that could help

farmers, ranchers, consumers, and what Congress needs to do from your perspective to try to make this happen?

Mr. BAYDOUN. Absolutely, Senator. Thanks for the question.

In competitive markets, we know that prices come down, in part, because firms have to compete against one another to win over consumer loyalty. And the consolidation that we've seen over the last 20 years especially has created such a situation where pricing has been divorced from competition.

And so, whereas, once pricing was a fairly straightforward process that took into account factors such as the cost of materials, labor, the lack of competition, and also, the advent of algorithms, in which, you know, all sorts of industries, including beef processing, for example, use algorithms; all share the same algorithm, and that, effectively, allows these companies to collude in higher prices. Now, those higher prices are all across the supply chain and, ultimately, consumers feel that at the checkout line.

Senator TESTER. Well, I just appreciate this hearing because I firmly believe, if you're worried about how many ounces are in a potato chip bag, or Fritos, or an Oreo cookie bag, competition can fix that problem, but Congress has to do their job.

Thank you guys very much.

Chair BROWN. Senator Scott of South Carolina is recognized.

Senator SCOTT. Thank you, Mr. Chairman.

Thank you all for being here this morning.

Since taking office, the Biden administration has been on a regulatory blitz. And what I mean by that is, if you compare it to the Obama administration, where you saw about \$300 billion of increased cost resulting from more regulations, under the Biden administration, we've seen about a \$1.3, almost a \$1.4, trillion increase in the regulatory burden put on businesses. Having been in business, started a few businesses myself, that could only increase the cost of being in business.

Now, you compare that with the total cost of the Trump administration, that was a little bit over \$30 billion. So, \$30 billion with the Trump administration; \$300 billion with the Obama administration, and over \$1.3, nearly \$1.4, trillion of added regulatory cost.

Dr. Schrager, do you agree that the breakneck speed of new regulations finalized by this Administration has contributed to inflation?

Ms. SCHRAGER. Yes, it certainly has contributed. So, there's a lot of factors going on. But, certainly, when you make it more expensive for businesses to produce, spend more time on paperwork, especially a huge part of inflation that consumers are having problems with is the cost of housing. And certainly, a lot of regulation and especially a lot of environmental regulations that make it more expensive to build housing is making that more expensive. And I think we're seeing in a lot of surveys that, as I said, the cost of housing is really number one for a lot of consumers. So, I think deregulation would certainly—it wouldn't solve all of the inflation problems, but it would certainly help.

Senator SCOTT. Let me just stay on that subject because I hadn't thought about what you just said as it relates to housing. I've certainly seen the housing costs go up without question.

I served some time on the local government, where we improved and increased the building requirements in Charleston County. If you think about the regulatory burden that comes from a municipality or a county, and then, you add that on top of the State, and on top of that is the Federal Government, you see this regulatory burden that is in many ways for small businesses, frankly, oppressive.

I also think that an oppressive regulatory environment actually reduces competition and only benefits the players who are already in that space, and is more likely to create a monopoly in that space. That is not good for consumers.

Thoughts?

Ms. SCHRAGER. Yes. That's absolutely true. And, in fact, we see this a lot in Europe, who have a lot more regulatory burden, particularly around technology, which we're talking about here, and how firms use data.

And this was intended, as I said, to increase competition, but it actually had the opposite effect, because complying with all these regulations has actually made technological entrepreneurship much harder there.

Senator SCOTT. There's no doubt when you see our largest technological firms saying, "Please regulate me. Please regulate me," because it closes the door of competition. It kind of answers the question itself.

A different question for you: I won't say this very well, but I'll do my best. From my perspective watching the legislation leave Washington and impact the country, whether it's the first bill signed into law, the \$1.9 trillion legislation, that artificial stimulation where you're pouring new resources or cash into our economy—actually, artificial stimulation called money from the Government—increases the demand without increasing the supply. And so, if you increase the demand without increasing the supply, and you add on top of that the snarl from a transportation perspective that we saw in 2021 and 2022, it's harder to get your supplies. So, it only increases the demand because you have fewer supplies, and you have more money in the market, which also increases the supply.

The ultimate outcome of that is less supply, larger demand, and no real ability to see when your products are going to get there. That is very hard for businesses to manage, and it only leads to a more challenging environment.

Ms. SCHRAGER. Yes, exactly. I think even economists who associate themselves as Democrats have been saying that at least 3 to 4 percentage points of the initial inflation was due to stimulative fiscal policy, which has definitely sort of added to demand. And, you know, it's important to argue we still have very stimulative fiscal policy, despite the fact we're in a high inflation environment, which makes the Fed's job a lot harder.

Senator SCOTT. Right. I only have about 20 seconds left.

You said, I think, during your opening comments that the corporate profits peaked in 2021?

Ms. SCHRAGER. 2022.

Senator SCOTT. 2022. I think that's actually relevant as well. As we think about the greed of our corporations—and frankly, I'm not

going to sit here and defend any of them; they have the ability and responsibility of defending themselves—but, as a kid who grew up in poverty, the one thing that I can tell you is that the price that we’re seeing at the pump, and the lack of the ability for a single mother to navigate gas prices, energy prices, and food prices, when we see a glut of resources coming into the marketplace, and for 52 consecutive paychecks, inflation outpaces her wage increases, that’s a devastation. That’s not a problem, but a crisis.

Chair BROWN. Thank you, Senator Scott.

This question is to both of you, to Mr. Baydoun and to Dr. Bustamante. Ohioans are angry, as we all know, as they are all over the country, about the rising cost of everything. Every time they go to the grocery store, families pay for corporate stock buybacks, pay for executive bonuses. As prices increase, so do profits. Corporate profits climbed to record highs at the end of 2023, are projected to keep climbing through 2024.

Dr. Bustamante, how much are corporate profits, in their quest to drive them higher and higher, how much does that contribute to rising prices today?

Mr. BUSTAMANTE. Thank you for that question, Senator.

When we look at data from the San Francisco Federal Reserve, we actually find that more than two-thirds of inflation is actually being driven by supply factors and other factors that are not demand-related. And, in fact, when we look at corporate profiteering and we’re looking at markups, that’s largely accounting for about 16 percent of inflation that we’re actually seeing over the past 6 months.

Chair BROWN. Mr. Baydoun, what do you think about that?

Mr. BAYDOUN. Our own analysis, Senator, at Groundwork has found that, in the second and third quarters of 2023, corporate profits drove over half of inflation, about 53 percent of inflation.

Just a point of comparison, over the last 40 years before the pandemic, profits drove just 11 percent of inflation. And I think what’s interesting over this year is that, although consumer prices have risen, the price of inputs has gone down, and also, the labor share of income has gone down. And so, there’s still plenty more of savings to pass on to consumers, but there’s also plenty more to share with workers.

Chair BROWN. And what you said tracks with a report that I cited earlier on the Kansas City Fed.

Mr. Baydoun, you spoke about higher profits are contributing to higher prices. We’ve seen companies now raise prices, as you know, and shrink their products, while charging people the same price or even raising the price. This means people are either buying less of the things they need or paying more, or both.

A study found that so-called “shrinkflation” accounts for about 10 percent of the price increases consumers experienced. Consumers really don’t know how much their money is getting them.

Could you provide other examples of how corporations use so-called “shrinkflation” to make it harder for consumers to find the lowest price?

Mr. BAYDOUN. Absolutely, Senator.

I think Americans would really be stunned to see the breadth of how many different strategies there are. It really runs the gamut

from lowering the number of paper towels that come in a roll, the number of Kleenex that are in a box. It could be increasing the indentation of a drink, so that, you know, less liquid could go inside. It could be discretely reducing the amount of dish soap in the bottle. And so, really, there's all sorts of creative ways.

I would also add that, in addition to shrinkflation, there's also a practice known as "skimpflation," which involves degrading the quality of those products, while keeping the price the same.

And so, we're now seeing a new frontier of ways to deceive consumers into paying higher prices.

Chair BROWN. So, talk about, if you would, talk about technology, what kind of ways it's easier for corporations to charge higher prices and keep consumers in the dark. And can we have free market competition of customers who cannot compare prices and can't really shop around for lower prices?

Mr. BAYDOUN. Absolutely, Senator.

You know, pricing, as I said, was a fairly simple formula. It took into account the cost of materials, the cost of labor, and some rudimentary analysis about what your competition was up to. And companies would simply stick that final price of that calculation on a price tag and they would let it be.

But today, we are in a totally different era. Technology really enables companies to, number one, surveil consumers and collect data about consumers that, frankly, only our families and God should know about—things like marital status, ethnicity. And so, all of those things are really fed into algorithms that are able to test each one of our sensitivities to price hikes. And the goal is always the same. It's, let's find out the maximum price that each individual consumer is willing to pay.

Chair BROWN. Dr. Bustamante, your thoughts on that?

Mr. BUSTAMANTE. Yes, thank you, Senator.

What we ultimately know is that, when we look at these pricing strategies, they're very much black boxes that corporations are ultimately employing. And that really opens the door for potential discriminatory practices, for practices that ultimately harm families who are already on the brink of having so much financial stress in their lives.

Chair BROWN. Thank you.

I wanted to mention, next week, in the next hearing, we're going to talk about junk fees. And we know that the complexities of technology, and the comments you each made about the employment of these technologies by companies that produce these products, make fees even harder to ascertain and understand. CFPB just released a report that found that consumers pay more with complex pricing structures. The Committee next week will hold a hearing examining how junk fees hurt consumers and how we can ensure consumers can keep more of their own money. Senator Tillis of North Carolina.

Senator TILLIS. Thank you, Mr. Chairman.

Mr. Baydoun, so if someone making a business decision to charge a price that they believe is over a general market value, that reduces the number of people that can purchase it, do you think that's a bad practice?

Mr. BAYDOUN. Senator, I think if companies engage in practices that are unfair, deceptive—

Senator TILLIS. Well, no, I'm back to that specific use case.

Mr. BAYDOUN. Mm-hmm.

Senator TILLIS. I have a business person knowingly making a decision to price above, to reduce the number of people that could afford a product that I've decided to sell. Do you think that that's fundamentally a bad decision?

Mr. BAYDOUN. Not necessarily, Senator, but we do have—the concept of price gouging still applies. And if companies are raising prices to protect their profit margins from rising costs, that's one consideration. But if they're hiking their prices to reap super-normal profits, that's a problem.

Senator TILLIS. In your opening statement, I think you may have mentioned that you believe corporate profit margins are abnormally high. Do you agree with that, that they are abnormally high? Because that seems to be in conflict with the Fed report of September 2023, where they said, when you adjust for COVID, some of the COVID policies implemented, that they were, more or less, back to prepandemic levels. So, do you disagree with the Fed's assessment?

Mr. BAYDOUN. Senator, over the last 3 years, corporate profit margins have hovered around 70-year highs.

Senator TILLIS. So, you disagree with the Fed's assessment in their September 2023 report?

Mr. BAYDOUN. I'm not familiar with that specific—

Senator TILLIS. I'm asking for the record, in that context, if you disagree because it seems to be in conflict. I'm just curious.

Mr. BAYDOUN. Mm-hmm.

Senator TILLIS. And thank you, Mr. Baydoun, for the skimpflation. That's a new one I can add to my lexicon.

Let's use Frito-Lay as an example. Look, they're making—I was using that example. You answered the question differently.

But a homeowner who decides to price a house above the market is making that decision at an atomic level. I'm glad you actually did not say that that was a bad thing. Because we can't separate, we can't create a free market sort of concept for small businesses and not a free market concept for big businesses, because those big businesses were once small.

And I think it's very dangerous when we decide that perhaps we should have some oversight to determine what an adequate profit margin is for, let's say, a Frito-Lay. I don't know, you're probably too young to remember it, but Frito-Lay had a catastrophic failure with fat-free potato chips. Do you remember those, Mr. Chair, olestra, that ended up not doing very well?

Businesses don't always succeed. Sometimes businesses lose money. And so, we only seem to talk about this when businesses are succeeding, when businesses aren't going into bankruptcy. I, for one, think that the internet is doing a pretty good job of identifying when potato chip bags are getting smaller.

I, for one, am very cheap. So, I'll go find a brand that I like that hasn't skimped on me or hasn't shrunk on me. I don't know why the free market is not going to take care of this.

But you did bring up something that's critically important that I happen to agree with. It's actually the only thing I agree with, to be honest with you, based on your opening testimony. And that is the use of consumer data. This is where we're failing.

We just had a hearing, Mr. Chair, in Finance yesterday. A couple of years ago, when Europe implemented GDPR, Congress was hot to say, "We've got to get controls over data. People should have to explicitly opt into having their data shared, knowingly marketing it," et cetera. Everybody was hot on it, and then, all of a sudden, we found out there were two or three committees involved. We wasted 2 or 3 years, and we haven't done a damn thing.

As a matter of fact, we've implemented a patchwork, States have, that are actually making it more costly. So now, to some people here, bad corporations are actually incurring more costs because they're having to adhere to a patchwork of data privacy rules at the State level, because Congress has failed to act.

I actually believe, if we want to reduce prices, then we have to go back to what Ranking Member Scott referred to. We can't just say it's just corporate greed. We have to look at the last 3 or 4 years of added regulatory burdens, of a lack of really trying to work on trade agreements—all these things that actually affect global competition and, ultimately, price points.

But, on that issue, because it was brought up in Finance, on data privacy, data ownership, data breach, boy, I hope we can get that under control, because if we do, it will fix some of this stuff that you're talking about.

Thank you, Mr. Chair.

Chair BROWN. Thank you, Senator Tillis. Senator Warren of Massachusetts is recognized.

Senator WARREN. Thank you very much, Mr. Chairman.

If we're going to talk about markets, and how perfect markets are, maybe the one thing we should talk about is how concentrated markets have become. And when we have concentrated markets, we have a whole lot less competition.

So, just a handful of companies have taken over the food industry, thanks to literally hundreds of mergers over the last 50 years. Just four grocery chains control an average of 72 percent of sales in American cities. And in most grocery categories, like bread, pasta, beef, cereal, just four companies control more than 60 percent of the market.

Now, less competition means food brands don't have to compete on either price or product quality. For families' pocketbooks, that means higher prices. Grocery prices have climbed faster than inflation over the past few years. Now, families are paying 25 percent more than they did before the pandemic.

So, I want to talk today about the tricks and traps that families face when they head to the grocery store. Dr. Bustamante, you have researched corporate pricing practices. I understand that when inflation increases, food producers and grocery stores may need to pass on some of those higher costs to customers. But the question is: have groceries gotten more expensive just because of inflation—that is, passing along higher prices—or is there more going on here?

Mr. BUSTAMANTE. Thank you, Senator.

What we actually see is that, if you look at the long-term price, the actual marginal cost of production for many groceries has actually gone down. And part of the big reason for this is actually with just the nature of the supply chains that have actually been developed over time.

That being said, those lower marginal costs were not passed on to consumers. Instead, what we see is that, for the past 40 years, this just growing and fastening trajectory of markups, basically, again, firms pricing their products and services at a much higher rate than the actual increase in cost. And what we see, during the past few years, that's just been accelerated due to the pandemic.

Senator WARREN. Right. And something they can do because there's a lot of concentration in the industry, so there's not much competition.

In fact, corporate profits rose five times faster than inflation between 2020 and 2022. Kraft Heinz, which sells everything from Oreos to pasta sauce to coffee, increased profits by 448 percent over 2022. Cal-Maine, the largest egg producer in the U.S., increased profits by 718 percent. In fact, for most of 2023, corporate profits drove over half of inflation.

Now, that hasn't stopped Big Food from pulling out another trick. Jacking up prices was not enough. So, food companies have decided to quietly shrink the size of products—lobbing off a few inches here, a few chips there, or a few cookies somewhere else.

This shrinkflation is all about deceiving customers, so that corporations can have their profits. The CEO of the snack company Utz admitted calling shrinkflation “the path to higher margins.” So, it seems like we lost the basic principle of knowing how much something costs before we pay for it.

Mr. Baydoun, you have been studying corporate behavior for years. Have you seen, in your research, have you seen a shift in behavior here?

Mr. BAYDOUN. I have, Senator. Companies deploy a vast array of tactics that really threaten to make the price tag as we know it totally obsolete. I'll just name a few.

In addition to shrinkflation, there's also skimpflation. This is the idea of degrading the quality of a product by using inferior ingredients, while keeping the price the same or higher.

There's also dynamic pricing. This involves changing the price of a product hundreds, thousands, even millions of times in a day or week—making it difficult to predict costs.

And finally, there's a practice known as drip pricing. This involves adding on mysterious, confusing fees, as consumers are making a purchase, as opposed to building all of those fees into the up-front cost.

Senator WARREN. OK. So, you've got a lot of tricks and traps you identify. I understand it not only happens when you pull something off the shelf, it also happens when families get to the cash register, when they get ready to check out.

Mr. Baydoun, let's say you've picked out all of your groceries. The cashier rings them up or you ring them up yourself. And you use your credit card to pay. And you talk to us a little bit about the opportunities that big credit card companies have to squeeze consumers on their groceries?

Mr. BAYDOUN. Absolutely, Senator.

In many ways, customers get gouged once at the checkout line, and in many ways they get gouged again if they carry that balance on a credit card—not only through exorbitant APRs, but also through junk fees, like late fees. You know, up until recently, credit card issuers could charge as high as \$41 for missing a payment, but, thankfully, the Consumer Financial Protection Bureau actually capped those fees at eight dollars, and that's something that will save 45 million Americans an average of \$220 a year, \$15 billion annually in total. And so, those are the sorts of interventions we need.

Senator WARREN. And special thanks to the Biden administration that has really started attacking these junk fees.

Congress also needs to step up. We need to pass Senator Casey's Shrinkflation Prevention Act to end shrinkflation and my Price Gouging Prevention Act to give the FTC the tools it needs.

Thank you, Mr. Chairman.

Chair BROWN. Thanks.

Senator Hagerty of Tennessee is recognized.

Senator HAGERTY. Mr. Chairman, I'm wondering why we're having this meeting today. I have been, you know, very surprised by the fact that we're going through some type of blame-shifting exercise, where we know what the real cause of inflation is here in America. And the cause of inflation in America right now over the past 3½ years has to do with policies that have been implemented by the Biden administration and by Democrat legislation that was passed without a single Republican vote—the American Rescue Plan, as it was called; the Inflation Reduction Act, as it was called—dumping trillions of dollars into the economy, stimulating demand way beyond what the economy could encounter.

You jack up demand and at the same time imposing massive regulatory constraints that suppress supply. It's obvious what's going to happen: prices go up.

The American family, the American consumer can't withstand this. Prices are up 19 percent since Joe Biden took office. Young families can't afford a new home right now. The American public is suffering dramatically. Yet, here we are in a blame-shifting exercise trying to argue about how many potato chips are in a bag of potato chips.

Look, the American public can see right through this. Whether we pay the same price for fewer potato chips or pay more for the equivalent number of potato chips, inflation is real. And inflation is the product of policies that have been implemented that are damaging the American economy.

You think about the blatant vote-buying that the Biden administration has undertaken with student loan forgiveness. Again, billions of dollars more into the economy—putting it on the backs of hardworking Americans to pay off doctors and lawyers and people with graduate degrees.

The American can see through this. The American public is suffering. We've got bank failures. We've got serious issues that this Committee should be addressing. Yet, here we are today talking about some sloganeering exercise called "shrinkflation." This is not what we should be considering, Mr. Chairman.

Chair BROWN. Thank you, Senator Hagerty. I guess you weren't here when we talked about that same bill when we limited the cost of insulin to \$35 a month.

Senator Smith of Minnesota is recognized.

Senator SMITH. Thank you, Mr. Chair.

I have a question I'm going to bring to you, Mr. Bustamante, in a minute, but I want to just follow up on what Senator Hagerty was asking about. He seems to be suggesting that Government spending is what is contributing to rising prices that consumers are experiencing at the grocery store or when they buy auto insurance.

So, do you think the Child Tax Credit was contributing to inflation?

Mr. BUSTAMANTE. Thank you for your question, Senator.

When we actually look at, whether it's at 2022, whether it's looking at 2023, or even during the past 6 months, about two-thirds of inflation is actually due to supply factors, as well as other factors unrelated to demand.

Senator SMITH. Right, right. So, our investment in the Child Tax Credit and housing assistance, and student loan forgiveness, is not what's causing prices to go up for consumers.

And I actually think what I hear from my constituents in Minnesota is they're trying to figure out, like, why is it that I'm paying so much more at the same time that corporate profits are going up so much? I just had this question today, Mr. Chair, when I had my coffee with Tina, with Minnesota constituents. And one of my constituents was trying to understand why his insurance, his home insurance rates are going up so much.

Now, let me ask you about this: I want to actually hone in on auto insurance, which has been emerging as a huge driver in rising prices. In Minnesota, car insurance rates have gone up 35 percent, more than 35 percent, between 2022 and 2023. Now, some of that, of course, can be attributed to rising costs of car parts and other market forces, but there's also been a real reduction in coverage options and fewer choices for consumers. And consumers are getting squeezed here.

So, can you talk about this a little bit? What are you seeing when it comes to rising car insurance rates? And to what do you attribute these increased costs? And let's be honest, another sector where there's a fair amount of concentration, as Senator Warren was discussing.

Mr. BUSTAMANTE. Thank you, Senator.

You're actually pointing at two main factors that are driving inflation and higher prices in the insurance industry, which is a key driver to inflation today.

One is consolidation. There are just fewer insurance providers out there, and that has enabled them to collude and, ultimately, pass price hikes much greater than the actual cost to replace parts or replace cars.

And then, the second factor, which has been this black box of pricing strategies that insurance companies ultimately employ, which enabled them to both engage in economic discrimination, where they're able to offer very similar customers vastly different prices just based on their personal characteristics—oftentimes, in

ways that are not transparent, in ways that are ultimately driving prices much higher than they ought to be.

Senator SMITH. Competition and the free market works when there is good balance, when there is a shared power. So that consumers have power; businesses have power, and it allows consumers choice. And therefore, they are able to make the best choice and not be sort of constrained by only having one or two places where they can purchase something.

And speaking of black boxes, Mr. Baydoun, I want to come to you next. We're seeing this huge affordability crisis in housing and in rents. I see this in my home State of Minnesota.

And one of the things that I'm particularly concerned about is how algorithmic pricing is being used to allow ways for landlords to be able to use their market power to raise rents in ways that are just patently unfair. Could you talk about this? I'm particularly concerned about RealPage, a company that has reportedly used confidential data and algorithms to help landlords indirectly collude to set prices and even withhold supply in the market.

Mr. BAYDOUN. That's right, Senator. And, you know, if a group of landlords controls most of the units in a neighborhood, and they all use the same algorithm to suggest prices, that algorithm can, effectively, drive up prices and facilitate collusion in the same way that a human could. And so, if these landlords were getting together at a barbeque and deciding to raise prices, they could come to the same sort of level of price hikes; the algorithm could come to the same level of price hikes that humans can.

Senator SMITH. That's right. And, I mean, that kind of collusion to raise prices across an industry sector, I mean, we don't allow that, right?

Mr. BAYDOUN. No, it's illegal.

Senator SMITH. Right.

Mr. BAYDOUN. And that's why I certainly applaud the Federal Trade Commission for applying antitrust law to these more modern scenarios and very effectively making the point that algorithms can facilitate collusion.

Senator SMITH. Yes, I agree with that. RealPage is now the subject of multiple investigations and lawsuits. And I wonder how long it will take before the next iteration of this strategy comes about and where we go from here.

Do you have any advice for us? I appreciate you calling out the FTC, which I think has been doing an excellent job. But other advice for us, as we look at ways to put some guardrails around how this technology can lead to collusion?

Mr. BAYDOUN. Absolutely.

I would also call out junk fees in rental. I think that's something that's a new frontier and, increasingly, the cost of rent, the upfront cost that renters are seeing, is not the final cost they pay. And I think this body and other regulatory agencies really need to protect the basic guarantee that the price we see is the price we'll pay.

Senator SMITH. Thank you very much. Thank you, Mr. Chair.

Chair BROWN. Thanks, Senator Smith. Senator Britt from Alabama is recognized.

Senator BRITT. Thank you, Mr. Chairman.

I appreciate all of you being here with us today. I would be the first one to say that I think we can all agree that any practices of deceptive price gouging or intentionally misleading of consumers, or elsewhere, are completely and totally unacceptable. But we already have laws in place to prevent and enforce against that.

What we're here to discuss today is a separate matter. The fact is that businesses, just like families in Alabama and in Ohio, Mr. Chairman, all across our country, are having to rethink and adjust their spending patterns to adapt to the current economic circumstances—circumstances that are driven by persistent high inflation that we've experienced over the last 3 years. Those circumstances have wreaked havoc on businesses, especially the local Main Street establishments that make up the economic heartbeat of their communities and our Nation.

Core material costs have risen since 2021 and overhead costs in things like utilities and, as you just mentioned, rent and interest have also gone up significantly. Plus, packaging costs for products are up 40 percent and domestic shipping costs are up over 20 percent since 2021. Businesses of all sizes are having to make changes in response to those increased costs just to stay afloat and serve their customers.

However, rather than focusing on the root of the problem, I am, again, discouraged by the apparent lack of responsibility taken by the White House for the consequences of their own actions. Instead of changing policies, this Administration has chosen to change its messaging. It's engaged in an absurd attempt to blame-shift rather than to reverse course or to admit any fault.

Across the board, Americans' finances are being decimated from this Administration's policies. Seventy-eight percent of Americans reported having to live paycheck to paycheck in 2023—up 6 percent from the previous year. We've seen Americans' credit card debt surpass \$1 trillion—the highest amount in history.

We've seen families that have witnessed mortgage rates double—putting American dream of home ownership, which we know is something that so many people strive for, out of reach.

Let me just read you a few data points upon the recent March 2024 Consumer Price Index Report that came out. Compared to January 2021, the average Alabama household is paying \$918 more per month to purchase the same basket of food and services. Spending is up \$133 more per month when it comes to actually going to get something to eat. Spending is up \$162 more on shelter, and spending is up \$249 more a month on transportation.

I want to emphasize this: cumulatively, the average Alabama household has spent \$20,297 more due to inflation since January of 2021. The biggest issue impacting consumers today is not that they have less Fritos in the bag; it's that they have less money in their pocket.

You mentioned, Mrs. Schrager, in your testimony, you said, quote, "History has shown that misguided diagnosis of a problem and then implementing this misguided policy will actually create more harm for American households." I fully agree with you.

During the pandemic, we saw the Federal Reserve purchase trillions of dollars in Treasury securities, which initially contributed to

inflation. But by the pandemic, you know, while it's long over, as you mentioned, monetary policy has become more restrictive.

White House officials, then, routinely mischaracterized the high inflationary environment as "transitory"—spurring the Administration to pass unprecedented levels of spending, when the economy simply wasn't ready.

Ms. Schragger, in your testimony you also refer to a, quote, "loose fiscal policy," and with continued spending and Government subsidies toward things like clean energy programs and so-called "loan forgiveness." Can you please discuss how this type of "loose policy" only worsens inflation?

Ms. SCHRAGER. Yes. So, it does in a couple of different ways.

First of all, you know, we're just adding to demand. I mean, as you can see as well, we also have a very tight labor market, and a lot of these policies are supposed to be job-creating. So, we're just adding more, even more competition to the labor market, which raises wages, which is also going to raise prices. And as I said, it's just putting more money in the economy, more money in people's pockets.

But I think, also, there's more economic research and sort of a burgeoning consensus that just increasing the debt also increases inflation. Because people anticipate that, you know, eventually, this debt will have to be paid off, higher interest rates, and that also will increase inflation.

Senator BRITT. Absolutely. We have about 72 percent of our spending is mandatory spending and that continues to grow, and the debt at \$34.5 trillion is just simply unacceptable.

Ms. SCHRAGER. Mm-hmm.

Senator BRITT. It's not only fiscally irresponsible; in my opinion, it is morally irresponsible.

So, thank you so much.

Chair BROWN. Thank you, Senator Britt.

Apparently, there's a couple of people who were going to come back, but I'm not sure they are.

So, prior to closing, I thank you all, first of all. I always learn something at these hearings.

In addition to the substance that each of you offered in the questions, the way you answered questions, I learned another thing, and that is, the different kinds of Fed studies there can be. Senator Scott mentioned what's called a FEDS Note. It's not a report like the report I mentioned from the Kansas City Fed. It's one economist putting something out as a FEDS Note, but really written by one economist. So, you don't have to plumb very deeply to find a lot of different conflicting voices and almost a cacophony—I have trouble saying that word—cacophony of voices and ideas.

So, it's pretty clear that what the Fed said or the Boston Fed said about market consolidation, what the Kansas City Fed said about the contribution to inflation from corporate profits stands or are important. And I will just ask unanimous consent to put the Kansas City Fed study in the record.

Thanks to the witnesses today for your testimony. Senators who wish to submit questions for the hearing record, those questions are due 1 week from today, my colleagues, May 9th.

To the witnesses, each of the three of you, please submit your responses to questions for the record no more than 45 days from the day you receive them.

Thanks for being here.

The Committee is adjourned.

[Whereupon, at 11:16 a.m., the hearing was adjourned.]

[Prepared statements, responses to written questions, and additional material supplied for the record follow:]

PREPARED STATEMENT OF CHAIR SHERROD BROWN

Every time Ohioans go to the grocery store, they're paying for corporate stock buybacks and executive bonuses.

Prices today are far too high, and families are having a harder time finding a fair price, seeing more of their paycheck vanish into thin air.

I hear all the time from Ohioans who are justifiably angry that when they buy groceries and other basic essentials, they are paying more than they did a few years ago.

All of this is happening while corporate profits hit record highs.

Let's be clear: the fact that prices and corporate profits are going up at the same time is no coincidence.

A study by the Kansas City Fed found that corporate profits drove half of the price increases in 2021. And profits are still high today.

Now, of course I want businesses making money. I want American companies to be the most competitive and most profitable in the world.

What I am against is corporate profiteering that funnels money from working people to executives in the form of massive bonuses and stock buybacks.

I am against markets that don't foster competition and low prices.

I am against market manipulation.

A family walking into a restaurant or a store should not have to guess what they will be charged. Someone shopping online should not be paying more for the exact same product because of their online search history.

Businesses should create new goods and services that Americans want to buy, at prices justified by the cost.

And workers—who are critical for the success of any businesses—should be paid fairly for helping the business succeed.

Instead, the same Wall Street business model that has kept wages low and executive compensation high for decades is now pushing prices up too.

Corporations used supply shocks from the pandemic and war in Ukraine as an excuse to raise prices, and they keep raising them.

And let's be clear: they are not charging more because they're paying workers more. Wages are not causing price hikes. Corporations are raising prices far beyond their input costs, and funneling the profits to executives, not workers—just like they always do.

They've realized that when the market isn't free or fair, they can keep pushing prices up and up.

And they are using tried and true techniques—and new technology to refine old ones—to charge these higher and higher prices and get away with it.

When they're talking to their Wall Street investors, they admit what they're doing.

On an investor earnings call, one CEO said, "Consumers are tolerating [frequent price increases] well."

You hear that? Consumers are "tolerating" price increases.

I'm here to tell CEOs that working families cannot tolerate unfair price increases.

Price gouging isn't new, but it is getting easier to conceal.

By now, we've all heard about what the media dubbed "shrinkflation," where corporations shrink their products but keep prices the same, or even raise them.

The rolls of paper towels have fewer sheets, but they don't lower the price. The package of Oreos has fewer cookies in it, but the price stays the same.

That trick isn't new—but it's getting worse. What's next—will they shrink the amount of cream in the cookies? Will double-stuffed become half-stuffed?

Companies are also using advances in technology to find new methods of price gouging.

They're now using new pricing strategies and data collection to charge people more.

They call these tactics "dynamic pricing" and "personalized pricing algorithms."

"Dynamic pricing" and "personalized pricing." You know some corporate PR firm is really proud of those.

Customers don't want their pricing personalized. They want it to be fair, transparent, and as low as possible.

Gone are the days when Americans could simply expect to walk into a store having a clear idea of what they'd pay.

It's not just the act of walking into a brick-and-mortar store that's nostalgic—it's the notion of predictable, transparent prices.

With online retailers, the price can change every day or even within the hour, sometimes dramatically.

And they're spreading the technique to brick-and-mortar stores, adding electronic menu boards to restaurants and digital price labels to shelves so that corporations can raise the price at a moment's notice.

It's frustrating, and it makes impossible for people to compare prices and shop around—key ingredients in any fair, open market.

Families with fixed budgets cannot afford to walk into the grocery store or pharmacy not knowing how far their paycheck will get them.

Big Tech has exported their data-mining business model to retailers, and that has made all of this even easier for companies.

As more people shop online, retailers learn more about our browsing and shopping habits by collecting every bit of our online data. They can charge you more based on your search history.

You start shopping around to try to find the lowest price on a new washing machine. Now online retailers realize that you're in the market for appliances, and start showing you higher and higher prices.

Spying on people and charging them more for the products they need isn't innovation—it's price gouging.

Charging more for food during mealtime isn't the free market—it's exploitation. The story is always the same: Whether using old tricks or new technologies, corporations win, the rest of us lose.

That's not how free markets are supposed to work.

It's why standing up to corporate interests matters.

And people hate Washington because too many politicians do corporations' bidding.

It took us more than a decade of fighting the drug companies and their lobbyists and their allies in Congress to finally lower drug prices and to cap the cost of insulin at \$35 a month for seniors.

We need Members of Congress to grow spines and stand up to more of these corporate lobbyists. Senator Casey and I have a bill to crack down on companies shrinking their products and raising their prices, by directing the FTC to label this what it is—a deceptive practice.

We need our colleagues to join us in efforts like this, to lower prices and stop these tactics that distort the market, stifle competition and make it harder for Americans to afford the cost of living.

PREPARED STATEMENT OF SENATOR TIM SCOTT

Thank you, Mr. Chairman, and thank you all for being here with us this morning.

Listening to our Chairman, Democrats would have Americans believe that the economic pain they're feeling is caused by greedy corporations putting a few less chips in your chip bag.

It couldn't be more clear where the obvious pain is coming from.

The obvious pain is coming from a guy who lives at 1600 Pennsylvania Avenue.

The bottom line is that President Biden and Bidenomics has devastated our economy and devastated people working paycheck to paycheck. The highest percentage of Americans with the fewest dollars in their savings account for an emergency is now because of President Biden and Democrats' reckless spending.

They like to name their bills in attractive ways but the bottom line is a really simple thing: they all add to inflation.

Whether it's the "American Rescue Plan", the "Bipartisan Infrastructure Act", or the worst-named bill perhaps in American history, the "Inflation Reduction Act".

Anyone who believes that inflation has gone down because of the Inflation Reduction Act—all you have to do is look at the latest information coming out of the Federal Reserve itself. Inflation continues to increase.

These bills used to be hailed positively as a part of "Bidenomics," but now they're just economics because no one can afford President Biden's approach to solving the problems that we see in our Nation.

And I know this to be true, because it doesn't matter whether I'm at home in South Carolina or any other State around the country, I keep hearing the same things from consumers:

"Rent is too high. I'll never be able to afford a mortgage."

"I'm living paycheck to paycheck. My grocery bills are staggering, and I can barely afford them."

Or "I spent my entire life working and building up enough savings to retire, but now I'm worried those savings won't go far enough and I'll have to go back to work."

Or "I'm really worried about my finances and our economy."

And they always end with a simple question, "What can you do to help me?"

The number one concern besides the devastation that Americans are experiencing because of the unsafe, insecure, wide-open southern border, the number one concern outside of the border is the economy.

Americans across the country point their fingers at the devastation of inflation.

Inflation today is costing the average American family an additional \$8,508, just to buy the same things they were able to buy before President Biden took office.

It is truly unfortunate that the Biden administration continues to play a game of deflection—not taking responsibility, not solving the problem—but looking for someone else to blame other than the man in the mirror.

First, the Biden administration told us that the challenges that we were seeing with inflation were “transitory.” I cannot tell you the number of hearings I sat through—whether it was Secretary Yellen or others—who said that this is transitory because of COVID.

Well, then they changed the story that it was “Putin’s price hike” because of the Russian invasion of Ukraine.

And then it was “greedflation” or “shrinkflation” when the fact of the matter is simply, Biden’s inflation.

Here’s the truth: the Biden administration’s spending policies has caused the inflation that we’re seeing and the economic devastation it is producing. They are the key contributors to the price hikes we are all experiencing today.

Let’s take a step back to understand what inflation really feels like to the average American.

Prices across the board have certainly increased nearly 20 percent since Biden took office. Yes, 20 percent increase in just over 3 years.

For example, butter is up 27 percent, chicken 26 percent, white bread 30 percent.

When you go to the pump, you don’t have to believe what President Biden says about the challenges, all you have to do is see the price at the pump—40 percent increase. Energy costs, 25 percent increase.

I could spend the rest of my time this morning discussing other examples of how much prices have increased, but the American people know all too well the challenges that they face and where it comes. That’s why they trust him so little on the economy.

It is crystal clear, they know what they see with their own eyes, yet instead of looking at ways we can bring inflation down, this Administration continues to look for scapegoats such as corporate America.

Here’s what The Federal Reserve recently studied that the Administration’s—and that’s the Federal Reserve—studied the Administration’s claims that corporations are driving up inflation and came to the conclusion, and I’ll just read it, “unprecedented large and direct Government intervention,” and “accommodative monetary policy,” profits were back to their prepandemic levels by the end of 2022.

With respect to “shrinkflation,” the Biden administration’s own Bureau of Labor Statistics (BLS) reported that its effects have resulted in a 0.01 percent average annual increase to prices, and “has a very small impact on the overall inflation picture.”

I know this is really uncomfortable for some of you to listen to it, that’s just called the facts.

What we should be talking about today is the direct harm this Administration’s policies are causing as they continue to lead to more inflation.

We should be talking about the inflation spike we are likely to see after billions and billions of dollars in student loans are illegally forgiven by this Administration.

We should be talking about a Federal debt that is growing by trillions of dollars every single year.

The American people are smart. They see through this blatant attempt by the Administration to blame others for the inevitable results of their policies.

It’s time for the Biden administration and their friends on the other side of the aisle to wake up and smell the coffee that now costs 30 percent more.

Out-of-control, reckless spending led to runaway inflation that has remained elevated for years now. We must all accept that fact and return to sound economic policies that make affording the basics just a bit easier for the American family.

PREPARED STATEMENT OF BILAL BAYDOUN

DIRECTOR OF POLICY AND RESEARCH, GROUNDWORK COLLABORATIVE

MAY 2, 2024

Chairman Brown, Ranking Member Scott, Members of the Committee, thank you for the opportunity to testify today. My name is Bilal Baydoun, and I’m the Director

of Policy and Research at the Groundwork Collaborative, an economic think tank based here in Washington.

The price tag is a simple communications device we all take for granted. It's also an American innovation. John Wanamaker of Philadelphia, who invented the modern price tag, was a devout Presbyterian who believed that price discrimination—the idea that different people could pay different prices for the same product—was immoral. If everyone was equal before God, he believed, everyone ought to be equal before price. From the very beginning, the price tag was infused with a sense of fairness and equality.

Yet in America today, a fair price, let alone a sweet deal, is harder and harder to come by. In the age of corporate concentration and high-powered algorithms, pricing is in the midst of a troubling transformation, and the price tag as we know it may become a relic of the past.

Rideshare apps like Uber reportedly charge users higher prices if their phone battery is lower. Insurance companies fly drones above our property in search of signs of clutter, and car companies install software that reports our driving behavior to insurance companies, who use the data to hike our rates. Amazon reportedly changes prices millions of times per day, running secret pricing experiments like “Project Nessie” that reaped \$1 billion in revenue. Frustratingly, food delivery apps like UberEats show us one menu price up front, only to tack on a series of mysterious junk fees right as we're about to pay, and these last-second markups can be as high as 95 percent. Even a family outing to the bowling alley means encountering “surge pricing,” in which we're charged more for the sin of seeking out family fun on a Saturday night, the only available time for such outings for many families.

At every turn, companies are cutting corners on the path to record profits, and American consumers are paying the price. In a practice known as “shrinkflation,” companies discreetly reduce the size or volume of common household items—everything from jars of peanut butter to bars of soaps—to charge consumers more for less. For some essential goods like household paper towels, shrinkflation accounted for roughly 10 percent of the price increase consumers experienced over the last 4 years. Indeed, big profits increasingly come in smaller packages.

While price hikes aren't new, today's companies have reinvented them, relying on surveillance, deception, and even high-tech forms of collusion to wring as much as possible out of American consumers. All of these tactics converge on a single goal: find out the maximum price each individual consumer can be charged at any given time.

It might seem counterintuitive that companies are reaping record profits by simply hiking prices. After all, in competitive markets, firms have to innovate, improve their products and services, and take calculated risks to win over consumers. But a perfect storm in our economy made it much easier for companies to simply price their way to profitability.

First, companies got bigger, and competition in many industries has dwindled. Over the last few decades, we've seen runaway corporate consolidation across our economy. About three-quarters of domestic industries have become more concentrated and are dominated by fewer players than they were 20 years ago. This grants the remaining corporate giants the freedom to hike prices without fear of being undercut by the competition. In many markets, there simply is none.

Second, pricing went high tech. Technological advances such as cloud computing, artificial intelligence, and surveillance targeting have enabled companies to collect reams of personal information on consumers and change prices in under a nanosecond. These technologies help companies build profiles of individual consumers that include things like our age, marital status, estimated salary, ethnicity, the magazines we read, and even the kinds of topics we talk about online. All of these private aspects of our lives can be used to determine how much price hiking each of us can tolerate.

Finally, market power and technological advances came together in the shadow of inflation, giving companies the cover they needed to begin rolling out pricing strategies they'd previously thought of as risky precisely because consumers dislike them. But with prices rising everywhere, consumers couldn't discern which hikes were justified by companies' own rising costs, and which were truly excessive. As the head of research for Barclay's bank told *Bloomberg* in 2022, “The longer inflation lasts and the more widespread it is, the more air cover it gives companies to raise prices.” Visa's CEO was still more direct, saying, “historically, inflation has been positive for us.”

The complex algorithms often entrusted with maximizing profits through rapid changes in pricing have neither a conscience nor legal training. That is why algorithmic pricing can be both discriminatory and collusive. If you are charged a higher price for shopping at a chain store in your zip code, for example, that can function

as a proxy for racial price discrimination. And when different firms in the same industry rely on a shared algorithm to set prices, that algorithm can fix prices just as a human agent can. We saw this play out in the rental market. In one neighborhood in Seattle, 70 percent of apartments were overseen by just 10 property managers, and all of them relied on the same pricing software sold by RealPage.

But we don't have to accept the end of a fair price as inevitable. To start, we must continue to enforce existing laws outlawing collusion, price fixing, and unfair and deceptive practices. The Federal Trade Commission and State attorneys general have doubled down on the idea that algorithmic collusion is no more acceptable than collusion conducted by human agents in a smoke-filled back room.

But new laws are also necessary to ensure regulations keep pace with these rapidly changing tactics. The Price Gouging Prevention Act introduced in this chamber would enable the FTC to implement and enforce a Federal anti-price gouging statute, saving consumers money in the 13 States that don't have price-gouging protections on the books. Likewise, the Shrinkflation Prevention Act would classify shrinkflation as a deceptive practice and empower the FTC and attorneys general to take civil action to protect consumers' pocketbooks.

We must also continue to make progress on eliminating junk fees and regulating complex pricing structures that push hidden fees on consumers. The CFPB's late fees rule demonstrates that policymakers can—and must—take on predatory, deceptive behavior and act as a strong check on corporate power. By capping late fees at \$8, the CFPB will save American families more than \$10 billion annually. The interagency approach taken by the President's Strike Force on Unfair and Illegal Pricing with the Department of Justice and FTC represents a key step in tackling predatory pricing by deploying every available tool.

Finally, we can't allow companies to harvest our data and use it to price discriminate against us. CFPB Director Chopra noted recently that payments data (e.g., Venmo) is the "holy grail" of personal pricing. Allowing companies access to transaction data will open up a new frontier for exerting power over consumers. Protecting data privacy, including transactions data, is essential to confronting this new pricing regime and ensuring companies cannot surveil consumers as a means of pushing arbitrary price hikes based on unfair calculations of consumers' "willingness to pay."

Through these actions and others, we have the tools to restore a fair price in America—we just have to use them. Thank you, and I look forward to your questions.

PREPARED STATEMENT OF ALLISON SCHRAGER

SENIOR FELLOW, MANHATTAN INSTITUTE

MAY 2, 2024

Chairman Brown, Ranking Member Scott, Members of the Committee: thank you for the invitation to discuss with you today how price increases, shrinkflation, and technology may be harming consumers. I am a senior fellow at the Manhattan Institute, where I research fiscal and monetary policy and financial markets. I am also a columnist at *Bloomberg Opinion*.

The high inflation environment we are in is a terrible economic burden for American households—especially those living paycheck to paycheck, who are struggling to afford groceries, let alone enjoy the occasional meal out with their family. It has also proven more persistent than policymakers hoped. It is tempting to blame whoever raised the prices we see, the firms we buy goods and services from, who appear to be getting rich from our rising bills. But they are not at fault; they are merely reacting to the realities of the high and uncertain environment we are all facing.

Firms can increase prices several ways: they can simply increase the prices we all see—the sticker price, they can reduce volume of what we buy but still charge the same price-shrinkflation, or they can practice dynamic pricing—charging only some customers a higher price. All of these feel unfair to many consumers. But it is the high inflation environment that's harming consumers, not how firms respond to it.

The Manhattan Institute for Policy Research does not take institutional positions on Federal, State, or local legislation, rules, or regulations. Although my comments draw upon my research and writing about the economy as an Institute fellow, my statement is solely my own, and should not be construed as my employer's.

In order to bring inflation down, we need to understand it, how it started, and why it persists. History has shown that misdiagnosing the problem and then implementing misguided policies will create more harm for American households.

Inflation accelerated coming out of the pandemic, when the economy faced constrained supply, from pandemic related shortages, and high demand, the result of people emerging back into the economy after being at home with nowhere to spend money, and extremely accommodative fiscal and monetary policy. Some of that policy could be justified at the height of the pandemic, and it was a lifeline for many Americans who were unable to work. But the expansionary policy was too large and went on for far too long and ultimately contributed to inflation. Economists estimate expansionary fiscal policy contributed as much as 4 percentage points of our excess inflation. Today inflation is lower, down to about 3 to 3.5 percent from the high of 8.6 percent.

The fact that inflation is still high in the service sector—and wage growth is more than 4 percent—suggests that it may stick around for the foreseeable future. In short, the supply constraints have largely been resolved, but demand remains elevated, and the higher inflation has permeated into our economy. Our current fiscal policy stance is not helping. While monetary policy has become more restrictive, fiscal policy remains very loose, with continued infrastructure spending, subsidies to industries such as chip manufacturing, clean energy, and student loan forgiveness. This loose policy worsens inflation by adding more demand to the economy and adding further to the debt.

Greedflation

Inflation cannot be blamed on greedy corporations. First, there is no reason to think corporations have suddenly become greedy. It is natural to increase prices when facing a period of high demand. This can feel unfair sometimes, but it is an important part of market functioning.

Take the example of an umbrella salesman in the rain. It may feel unfair that he increases his price when it rains, but if he didn't increase prices when it started to sprinkle, there would be no umbrellas left when there is a downpour. Or, if he can't make more money in the rain—why would he bother selling umbrellas and sitting in the rain himself?

We see a similar story playing out in other markets today. Prices are increasing because demand is still high: consumer spending is still up, there is a vigorous labor market, and GDP is growing. And prices tend to rise more when demand is high. This price adjustment is how the market rations goods.

It is true that there was an increase in corporate profits in 2021 when inflation first spiked. But profits peaked in 2022 and have decreased and leveled off since then.

One way to understand what happened is that, initially, firms raised prices in response to increased demand and limited supply, just like the umbrella salesman. They did so because:

1. The high demand environment pushed prices up, and consumers were willing to pay more because there was more money in their pockets coming out of the pandemic.
2. Firms rightly anticipated a higher inflation environment that would also increase the costs of their inputs, including labor, and they needed to increase prices to stay in business.

This is why profits initially increased. At first their costs of inputs did not go up as much as prices because many firms had previously locked in wage and input costs. But as inflation continued, firms renegotiated those contracts and gave their workers wage increases, which eroded profit margins.

Shrinkflation

In addition to higher prices, many consumers are getting less for their money—for example: fewer potato chips in a bag. This so-called shrinkflation is just another way for firms to increase prices. This isn't a driver of inflation—it a manifestation of it.

Rather than increase the price consumers pay, they might shrink the size of their product instead. Again, this can be extremely frustrating for consumers because they are getting less and paying more. But it is another way for firms to deal with price pressures from increased demand. The alternative is to simply increase prices, but whether one approach is better than the other is hard to say. Charging more may price consumers out of the market entirely.

Dynamic Pricing

Another way that firms can respond is not increasing prices for everyone, but only for consumers who use goods or services in high demand times or are willing to pay more. This is known as dynamic pricing—and it is another frustration for many consumers.

Wendy's recently attempted this when they floated the idea of charging more during peak times. Technology is aiding this effort because firms can collect data on potential customers and gain insight into their willingness and ability to pay.

An example of dynamic pricing that predates our current inflation era is airlines. They charge more for peak time flights or by charging for services that were once included in the quoted airfare, such as checking a bag or picking your seat. This is another way of passing on higher costs to some customers. This is especially attractive for airlines who face pricing pressure to keep fares low because of technology that enables consumers to comparison shop.

Believe it or not, dynamic pricing can be better from a consumer welfare point of view than increasing prices for everyone. For example, airlines may price discriminate, but the cost of flying has fallen and it has become more accessible. In the 1980s, about 30 percent of Americans had flown in the last year; now it is more like 50 percent—in large part because lower income Americans have a cheaper option, even if it means worse service.

The same is true for Wendy's, who can either increase prices for everyone in response to higher input costs or can increase them only for customers who value convenience more and thus put a higher premium on eating at peak times. The result is more people can go to Wendy's, because a price increase for everyone excludes more people from the market. It may feel unfair, but economists generally agree that including more people in a market is beneficial for consumers.

We can probably expect more firms to dynamically price in the future. Technology empowers firms to target individuals, to show them ads for the goods they want and charge them more than other consumers. Artificial Intelligence has the potential to turbo charge this practice, in the not-too-distant future we may all see different goods and prices when we shop online.

But while technology can make dynamic pricing easier for firms, it also can empower consumers. Algorithms can help customers find products they most want and best suit their needs. Technology also facilitates comparison shopping and allows consumers to post reviews, a very valuable resource for future shoppers. Online marketplaces may mean more complex pricing, but they also enable more price comparison for consumers, compared to visiting a brick-and-mortar store. Research suggests that this technology contributed to the low inflation environment before the pandemic.

It feels unfair, because it is different to what consumers have become used to—though everyone paid different prices when people haggled for goods. But a more personalized shopping experience may end up creating a more inclusive marketplace where more people can afford to participate and it is easier to find the goods and services that best suit their needs.

Conclusion

We remain in a high inflation environment; this is what is harming consumers—not greedy corporations who also face pricing pressures. This is largely the result of a still growing economy, and it is made worse by Government policies that continue to stoke demand. We are still increasing the debt and giving households handouts. One benefit of this environment has been rising nominal wages (something many of us wanted), especially for lower earning Americans. But it also means inflation is still high—and it means rising costs for goods and services for these same people and the rest of the population.

There is no way around the fact that this elevated demand will increase prices. Firms can increase prices in a number of ways: increasing the sticker price, providing less for the same price, or dynamic pricing. All provide understandable frustration for consumers, but these are the results of a high and uncertain inflation environment—not the cause.

Past attempts to keep companies from raising prices, such as price controls, have proved counterproductive. They create shortages, reduce the incentives to sell or produce, and worsen inflation. The best way to fix this is to not undermine the Fed's attempts to control inflation and pull back on spending, stop handouts, especially to higher earners who don't need them, and to reduce the debt.

PREPARED STATEMENT OF ALÍ R. BUSTAMANTE

PROFESSOR OF PRACTICE, UNIVERSITY OF NEW ORLEANS DEPARTMENT OF ECONOMICS
AND FINANCE, AND DIRECTOR, WORKER POWER AND ECONOMIC SECURITY PRO-
GRAM, ROOSEVELT INSTITUTE

MAY 2, 2024

Chairman Brown, Ranking Member Scott, and Honorable Members of the Committee, thank you for inviting me to speak on the pressing issues surrounding how corporate pricing strategies are impacting prices, and their implications for consumer finances.

In my testimony I will make three points:

1. Inflation is being driven, in part, by corporate profiteering related to firms' price-setting power.
2. Corporate profiteering is harming consumers, workers, and other businesses.
3. Government has tools that can restrict corporate profiteering and protect consumers and small businesses.

First, there is evidence that large corporations are engaging in pricing strategies that are contributing to elevated prices. Research conducted by my colleagues and I at the Roosevelt Institute has found that a recent sharp rise in markups by large corporations is contributing to inflation.¹ Markups are the difference between the prices consumers pay for goods or services and how much it costs to make or provide them. Markups are low in competitive markets but as corporations have accumulated significant market power over the years, they have been able to increase prices without sacrificing profit. Our research finds average markups grew from 48 percent above cost in 2014 to 69 percent above cost in 2023 and that this growth is being driven by a few large corporations.²

For consumers, markups can take several forms through various pricing strategies employed by corporations:

- *Standard Retail Markup*: This is the most straightforward markup, where sellers add a percentage to the cost of goods and services to generate profit.
- *Shrinkflation*: Reducing the quantity or size of a product while maintaining or increasing the price.
- *Dynamic Pricing*: A method of price discrimination whereby prices adjust in real-time using pricing algorithms and sophisticated consumer data, often with new artificial intelligence (AI) methods.
- *Decoy Pricing*: Pricing structures where firms introduce a third, less attractive option to lead consumers to choose a more expensive option than they originally might have.
- *Bundling*: Bundling products together to sell them at a price that seems to offer a savings compared to buying each item individually but that often includes a markup.

Markups, and the sophisticated pricing strategies that are driving them, are on the rise because of large corporations' outsized pricing power. Research finds that smaller firms in less consolidated industries have not driven explosive markup growth.³

Take the fast-food industry for example: my recent research of markups finds that the average markup in the fast-food industry grew by 14.7 percent during the past decade.⁴ When analyzing markups at the 10 largest fast-food firms in 2023 we found that they were the highest at Wendy's, McDonald's, and Restaurant Brands International (the parent company of Burger King and Popeyes). At these firms, prices were between 80 and 91 percent above companies' marginal costs. These large

¹Konczal, Mike, and Niko Lusiani. 2022. "Prices, Profits, and Power: An Analysis of 2021 Firm-Level Markups". Roosevelt Institute, June 21, 2022. <https://rooseveltinstitute.org/publications/prices-profits-and-power/>

²Bustamante, Ali R., and Ira Regmi. 2024. "Fast-Food Industry Profiteering: Why California Businesses Can Absorb a Higher Minimum Wage". Roosevelt Institute, March 28, 2024. <https://rooseveltinstitute.org/publications/fast-food-industry-profiteering/>

³De Loecker, Jan, Jan Eeckhout, and Gabriel Unger. 2020. "The Rise of Market Power and the Macroeconomic Implications". *The Quarterly Journal of Economics* 135 (2):561-644.

⁴Bustamante, Ali R., and Ira Regmi. 2024. "Fast-Food Industry Profiteering: Why California Businesses Can Absorb a Higher Minimum Wage". Roosevelt Institute, March 28, 2024. <https://rooseveltinstitute.org/publications/fast-food-industry-profiteering/>

companies are charging consumers above and beyond what is necessary for typical profit margins.

Second, there is ample evidence that markups—and corporate profiteering in general—by large corporations are harming consumers, workers, and small businesses.

Consumer surplus, how economists measure the social economic benefits of consumption, would have been 14 percent higher in 2019 if markups had remained stable at 2006 levels, and 50 percent higher if firms passed along the reductions in their costs over that period to consumers.⁵ This hits low-income consumers the hardest, as their disposable income is stretched even thinner, forcing them to make difficult decisions about the basic necessities and bills they need to cover.

Workers are also being squeezed: research shows that increases in markups lead to a decline in wages of approximately 12 percent, because markups lead to a reduction in the aggregate demand for labor.⁶ The harmful effect of markups on workers is also visible in the declining share of income going to workers.⁷ Rather than rewarding workers who drive productivity in the first place, these large corporations driving growth in markups are the same ones returning higher profits from markups to wealthy shareholders via stock buybacks and dividends.⁸

Furthermore, markups reflect a “winner takes most” economic environment where large corporations with price-setting power also have the capability to reduce competition by creating barriers for new firms to enter the market, crowd out smaller firms, and squeeze supplier margins in order to protect and expand their market share.⁹

Lastly, I’d like to discuss the myriad of available Government tools that can restrict corporate profiteering and protect consumers, workers, and small businesses:

- We need to enforce and strengthen antitrust laws to prevent monopolistic practices and ensure competitive markets, particularly in industries where a few companies control significant market share, leading to higher markups.
- Policymakers can move to create guidelines and restrictions around the use of dynamic and personalized pricing to prevent unfair and deceptive practices by requiring businesses to fully disclose the pricing structure of their products and services. This would disincentivize corporations from employing these predatory pricing practices.
- To improve fairness and transparency in pricing, administrative agencies like the Consumer Financial Protection Bureau can mandate clearer disclosure of pricing components and service fees and enforce rules against deceptive pricing practices or hidden fees. This is particularly impactful in sectors prone to high markups, such as financial services and health care.

There are great economic benefits to be gained by reining in markups and unfair corporate pricing strategies, including lower prices in the short term and a more competitive economic environment for businesses and workers in the medium and long term. Yet, inaction from both regulators and legislators will enable corporate profiteering that continues to elevate prices, harm consumers, and squeeze small businesses.

⁵ Dopper, Hendrik, Alexander MacKay, Nathan Miller, and Joel Stiebale. 2022. “Rising Markups and the Role of Consumer Preferences”. 3939126. Rochester, NY: Social Science Research Network.

⁶ Deb, Shubhdeep, Jan Eeckhout, Aseem Patel, and Lawrence Warren. 2022. “Market Power and Wage Inequality”. Institute for Fiscal Studies, Working paper 22/40. <https://ifs.org.uk/publications/market-power-and-wage-inequality>

⁷ Autor, David, David Dorn, Lawrence F. Katz, Christina Patterson, and John Van Reenen. 2020. “The Fall of the Labor Share and the Rise of Superstar Firms”. *The Quarterly Journal of Economics* 135 (2):645–709.

⁸ Palladino, Lenore, and William Lazonick. 2021. “Regulating Stock Buybacks: The \$6.3 Trillion Question”. Roosevelt Institute, Working paper, May 10, 2021. <https://rooseveltinstitute.org/publications/regulating-stock-buybacks-the-6-3-trillion-question/>

⁹ Autor, David, David Dorn, Lawrence F. Katz, Christina Patterson, and John Van Reenen. 2020. “The Fall of the Labor Share and the Rise of Superstar Firms”. *The Quarterly Journal of Economics* 135 (2):645–709.

**RESPONSES TO WRITTEN QUESTIONS OF CHAIR BROWN
FROM BILAL BAYDOUN**

Q.1. One thing shrinkflation and pricing technologies have in common is that it's difficult or impossible for consumers to know how these pricing mechanisms are being used to adjust the prices of the goods and services they're buying.

What sorts of disclosures are needed to let consumers and researchers understand how prices are changing?

A.1. Regarding shrinkflation, one approach may involve product labels that notify consumers of a change in a product's per-unit price. In France, for example, products that have been reduced in size without a commensurate decrease in price will require product labels to disclose the change.¹ Stores must comply with this change by July 1st of this year. France also empowers consumers to report such product changes to authorities via a consumer protection phone application.

As discussed in this hearing, companies have also deployed personalized pricing practices, which involves tying price to individual consumers' characteristics. There could be three general approaches to disclosures related to this practice.² The first is to require disclosure that the price is personalized. The second is to require disclosure of how the price is personalized, i.e., according to which consumer characteristics or behaviors. Third, regulators can require disclosure of how the personalized price compares to the "regular" price.

Technologies have also been used to stagger certain fees throughout the process of making a purchase, a practice known as "drip pricing." The classic case-in-point here is for-profit tax-filing services, which have in the past advertised free or discounted services, only to add additional fees as the consumer is filling out the required forms. The most effective solution on this front would be the establishment of a national standard for price display that requires disclosure of the total cost up front, inclusive of all fees. Lawmakers have pushed for this approach to improve hotel cost transparency,³ as the short-term lodging industry is notorious for the practice of drip pricing and junk fees.

**RESPONSES TO WRITTEN QUESTIONS OF CHAIR BROWN
FROM ALI R. BUSTAMANTE**

Q.1. Since the onset of rising inflation, corporate profits have reached record highs, surpassing levels last seen in 1947.¹ As noted in your testimony—"average profit markups grew from 48 percent above cost in 2014 to 69 percent above cost in 2023."² Your

¹ <https://www.nytimes.com/2024/04/19/business/france-economy-food-prices-shrinkflation.html>

² [https://www.europarl.europa.eu/RegData/etudes/STUD/2022/734008/IPOL-STU\(2022\)734008-EN.pdf](https://www.europarl.europa.eu/RegData/etudes/STUD/2022/734008/IPOL-STU(2022)734008-EN.pdf)

³ <https://castor.house.gov/news/documentsingle.aspx?DocumentID=404398>
¹ *Sellers' Inflation, Profits and Conflict: Why Can Large Firms Hike Prices in an Emergency?* Isabella M. Weber and Evan Wasner (February 2023). Economics Department Working Paper Vol. 343. <https://scholarworks.umass.edu/econ-workingpaper/343/>

² United States Senate Committee on Banking, Housing, and Urban Affairs Hearing on "Higher Prices: How Shrinkflation and Technology are Hurting Consumers' Finances". May 2, 2024. Testimony of Dr. Ali R. Bustamante

analysis also finds that “increases in markups lead to a decline in wages of approximately 12 percent, because markups lead to a reduction in the aggregate demand for labor.”³

Can you further elaborate on how workers have been faring in the current macroeconomic condition? Additionally, can you contrast to how CEOs have been faring?

A.1. Response not received in time for publication.

Q.2. One thing shrinkflation and pricing technologies have in common is that it’s difficult or impossible for consumers to know how these pricing mechanisms are being used to adjust the prices of the goods and services they’re buying.

What sorts of disclosures are needed to let consumers and researchers understand how prices are changing?

A.2. Response not received in time for publication.

**RESPONSES TO WRITTEN QUESTIONS OF
SENATOR CORTEZ MASTO FROM ALÍ R. BUSTAMANTE**

Q.1. I introduced the Fair and Transparent Gas Prices Act of 2023 (S. 67) to investigate unfair practices, provide market transparency, and prevent price gouging in the oil and gas industry. Specifically, the bill requires the Federal Trade Commission (FTC) to investigate anticompetitive, collusive, or other conduct related to oil and gas companies and markets.

How would an investigation into the anticompetitive, collusive, or other conduct related to oil and gas companies provide more insight into rising gas prices?

Can higher gas prices partially be attributed to anticompetitive practices in the oil and gas industry?

A.1. Response not received in time for publication.

Q.2. In S. 67, the bill directs the FTC to work with State attorneys general to carry out this investigation into the oil and gas industry.

Why is it important to coordinate and empower state attorneys general offices to combat unfair and deceptive pricing practices?

A.2. Response not received in time for publication.

³ Ibid.



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May 23, 2022

Current Policy Perspectives

Cost-Price Relationships in a Concentrated Economy

Falk Bräuning, José L. Fillat, and Gustavo Joaquim

The US economy is at least 50 percent more concentrated today than it was in 2005. In this paper, we estimate the effect of this increase on the pass-through of cost shocks into prices. Our estimates imply that the pass-through becomes about 25 percentage points greater when there is an increase in concentration similar to the one observed since the beginning of this century. The resulting above-trend price growth lasts for about four quarters. Our findings suggest that the increase in industry concentration over the past two decades could be amplifying the inflationary pressure from current supply-chain disruptions and a tight labor market.

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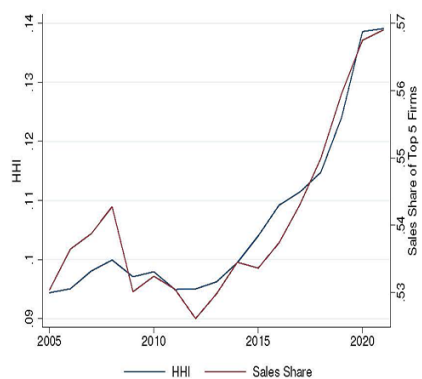
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1 Introduction

Recent research and public discussions have highlighted the increase in market concentration during the last two decades and its macroeconomic implications for productivity, economic growth, and price setting.¹ Figure 1 shows the longer-term trend in industry concentration and its acceleration during recent years based on the data used in this study. From 2005 through 2020, industry concentration increased about 50 percent, and several studies project concentration to increase further due to structural changes related to the COVID-19 pandemic (Diez et al., 2021). Does this increase in industry concentration change inflationary dynamics? Specifically, how does the pass-through of cost shocks into prices depend on industry concentration? In our analysis, we reveal a 25 percentage point larger pass-through of costs into producer prices when industries become more concentrated at the rate they have in the United States during our estimation sample of 2005 through 2018.

Figure 1: Trend in Industry Concentration



Note: Sales-weighted average industry concentration measured by HHI or the sales share of industry leaders (top five firms in terms of sales). Firms related to the utilities, financial services, public administration, gasoline stations, and postal service industries, as well as industries with only one firm at any point in our sample, are dropped. Sources: SP Global Market Intelligence, Compustat via Wharton Research Data Services (WRDS); authors' calculations.

In this environment of historically high industry concentration, the US economy experi-

¹Markups and concentration have been widely used as a measure of market power (see Syverson (2019)) and De Loecker et al. (2020). In this study, we use the Herfindahl-Hirschman Index (HHI) of sales and, for robustness, the combined market share of the largest five firms (leaders) in each industry.

enced a severe but short-lived economic crisis induced by the COVID-19 pandemic. GDP fell at an annual rate of 5.0 percent in the first quarter of 2020 and 32.9 percent in the second quarter. After the second quarter of 2020, the US economy experienced a rapid recovery with a buildup of inflationary pressures that have persisted longer than many projected they would in 2021. For example, as of December 2021, unemployment reached 3.9 percent and Consumer Price Index (CPI) annual inflation climbed to a 7 percent increase. However, these inflationary pressures were not an isolated effect of a rapid US recovery. The recovery itself was uneven across the globe, and many regions experienced longer-lasting containment measures that caused disruptions in global supply chains and associated increases in input prices.

While industry concentration is not new, its recent acceleration and the persistently high inflationary pressure in the United States have triggered a renewed interest by academics and policymakers in the role of concentration with respect to price increases. The objective of our analysis is to gain a better understanding of how the pass-through of costs into prices depends on industry concentration. Several recent papers explore theoretical links between concentration and inflation, including Mongey (2021), Wang and Werning (2020), and Baqaee et al. (2021), among others. But the qualitative predictions of these studies are ambiguous and provide little data-based guidance for policymakers. We contribute to this debate by providing empirical evidence that relies on industry-level data on producer prices and the industry concentration of sales, in addition to firm-level data.

Estimating the effect of concentration on the pass-through of costs into producer prices is challenging because costs and prices respond simultaneously to supply and demand shocks; that is, both variables are endogenous. As a consequence, an analysis of the empirical relationship between costs and prices cannot directly identify the pass-through of costs into prices.² To identify exogenous cost shocks in the data, we leverage the granular instrumental variables (GIV) method recently developed by Gabaix and Koijen (2020).³ The GIV approach combines two key insights. First, granular firm-level data enable identification of idiosyncratic cost shocks, that is, changes in cost that are exogenous to the overall evolution of the economy (or industry) and specific to a given firm. Second, due to the granularity of the firm-size distribution, that is, the fact that a few large firms account for a large

²For instance, suppose that a given industry faces a positive demand shock. It is likely that prices and costs will rise simultaneously—but the increase in prices will not be a result of the increase in costs. When costs and prices are considered together, given that each industry faces several positive and negative demand and supply shocks, one would expect the relationship between the two to be muted. This is exactly what we find empirically in our sample, where observed cost changes are not associated with statistically or economically significant price changes.

³For applications of the GIV, see, for instance, Galaasen et al. (2020), Adrian et al. (2020), and Gabaix and Koijen (2021).

share of the economic activity in a given industry, these arguably exogenous idiosyncratic cost changes identify exogenous variation of the aggregate cost measure changes in a given industry.

We follow a GIV approach to construct a measure of industry-specific cost shocks and estimate how concentration affects the pass-through of these cost shocks into producer prices. We find that cost shocks cause an economically and statistically significant increase in prices. Importantly, this pass-through is 25 percentage points larger in an economy that has seen an HHI increase of 0.02, which roughly corresponds to the increase in concentration in our estimation sample from 2005 through 2018. This calculation is conservative, because the concentration continued a sharp increase after 2018, as shown in Figure 1. Our findings suggest that the recent increase in industry concentration has contributed to the accelerating inflationary pressure resulting from supply shortages and tight labor market conditions.

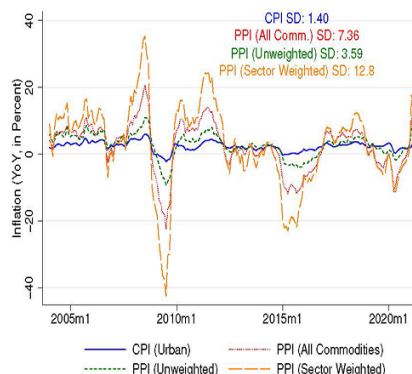
2 Data

Our main analysis uses data at the industry-quarter level and builds on two main data sources. We define industries based on their three-digit NAICS code. First, we collect balance sheet and income statement data from Compustat, which covers the universe of all publicly traded firms in the United States. We focus on operating expenses as our main cost measure. In addition to costs of goods sold, operating expenses include other costs of operating a business that are not directly tied to production, such as those related to non-production employee salaries, sales, and marketing. We also use the Compustat data to measure industry sales concentration by the Herfindahl-Hirschman Index (HHI) at the industry level. That is, we compute, for each industry, the sum of the squared sales share of each firm. To guarantee that our data are representative of the underlying market structure in a given industry, we exclude from our regression analysis industries that have fewer than two firms in Compustat at any moment in our sample and retail industries (NAICS 44/45).⁴

As a second data source, we use producer price data from the Bureau of Labor Statistics (BLS) at the three-digit NAICS level. Producer prices are available at the industry level, which allows us to exploit variation in industry concentration, both across industries and within industries across time, to understand its effect on prices. A firm-level analysis of the

⁴We exclude retail industries because they have a small number of firms in Compustat and because regional concentration is more important than total industry-level concentration (see, for instance, Rossi-Hansberg et al. (2018)). Our results are robust to changing these filters to simply exclude industries with fewer than 20 firms at any moment in our sample. As is standard in the literature, we also exclude the postal service (NAICS 491), utilities (NAICS 22), finance and insurance (NAICS 52), and public administration (NAICS 91/92) industries.

Figure 2: Comparison of CPI and PPI Inflation



Note: The figure shows different year-over-year (YoY) inflation measures, in percentages, during our main sample period. Standard deviations of the different inflation measures are reported in the figure. PPI (sector weighted) is the sales-weighted average PPI inflation among industries classified at the NAICS three-digit level. Sales weights are computed based on Compustat sales. Sources: BEA/BLS, authors' calculations.

cost-price relationship is not feasible given the lack of broadly available firm-level price data for firms in the United States. To measure the effect of concentration on real outcomes, we also collect data on industry employment and output from the BLS at the three-digit NAICS level. Our sample for the regression analysis comprises 35 industries. The sample period used in our main analysis runs from 2005Q1 through 2018Q4 and is constrained overall by the availability of Producer Price Index (PPI) data, in particular from the period before 2004. In 2017, total sales in our sample corresponded to roughly 53 percent of the aggregate final sales of US domestic product.

Figure 2 shows the annual inflation rate in our data set (industry-sales weighted or unweighted) measured as the growth rate in prices since the same quarter in the previous year, which we refer to as year-over-year henceforth. For comparison, we measure inflation using the CPI and PPI (all commodities) indexes. While the overall pattern is very similar across inflation measures, producer price inflation is much more volatile than consumer price inflation, with the PPI having a standard deviation 8 times larger than that of the CPI. The magnitude of our estimated effects must thus be interpreted accordingly, as they refer to the more volatile producer prices.

Because cost and prices are endogenous—higher product demand can lead to an increase

in output and associated higher production costs as well as upward pressure on prices—we use the cost data to extract exogenous (supply-driven) industry-level cost shocks based on the GIV strategy of Gabaix and Koijen (2020). Specifically, we recover firm-level idiosyncratic cost shocks as the residuals from a regression of firm-level cost changes on industry-time fixed effects, firm fixed effects, firm-specific trends, and time-specific changes in sales controls (to adjust for firm-specific demand). We then aggregate these residuals using within-industry sales shares as weights to construct our instrument for cost changes at the industry level. More details on the shock construction will be included in this note’s forthcoming companion working paper. Throughout this note, we use *costs* to refer to the endogenous cost measures observed in financial statements (for instance, operating expenses) and *cost shocks* to refer to our constructed measure of exogenous industry-level cost shocks.

3 Cost Pass-Through and Concentration

In this section, we investigate the pass-through of cost shocks into prices and how this pass-through changes with industry concentration. We first focus on the relationship between costs (or cost shocks) and prices independently of concentration to set a benchmark. We run local projections (as in Jordà, 2005) to understand how price changes respond to cost changes (or cost shocks) at the industry-quarter level. Our specifications include quarter-of-year fixed effects, industry fixed effects, and an industry-specific linear trend. Our results should be interpreted as being within industry and as deviations relative to the pre-shock local trend growth in prices. To interpret our results as the aggregate effect of concentration, we weight our regressions by lagged industry sales unless otherwise noted.⁵

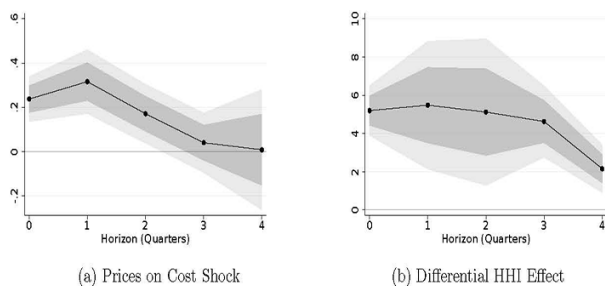
As shown in Panel (a) of Figure 3, an increase in cost shocks leads to a significant short-run increase in prices relative to the trend, consistent with a supply shock.⁶ The estimate suggests that a 1 percent cost shock increases prices by about 0.3 percent one quarter after the shock. For a different interpretation of the magnitude of the estimated coefficients, we can scale the response by the effect of the cost shocks on cost (operational expenses). In our sample, a 1 percent cost shock implies a 0.4 percent increase in observed operational expenses on impact. Therefore, the elasticity of industry prices to industry operational expenses is approximately 0.72 on impact of the shock and 0.95 one quarter after it.

Now we focus on the central question that motivates our analysis: How does this elasticity depend on concentration? To understand the differential effect of concentration on the pass-through, we augment our previous specification to account for differences in in-

⁵Also the BLS’s producer prices are sales weighted within industry.

⁶Consistent with this interpretation, we also find a significant negative effect of real output on cost shocks.

Figure 3: Pass-Through of Cost Shock into Prices



Note: Panel (a) shows the estimated response of price changes at the zero through four-quarters horizons in response to cost shocks. Panel (b) shows the estimated differential pass-through of cost shocks into prices based on industry concentration (HHI) at the zero through four-quarters horizons. Darker shades correspond to estimates \pm one standard error, and lighter shades represent 90 percent confidence intervals. Regressions are weighted by lagged industry sales. Sources: BEA/BLS, CRSP/Compustat, and authors' calculations.

dustry concentration, while holding constant other industry-specific characteristics, such as production-specific factors or other factors. Specifically, we include two important additions. First, we add the lags of HHI at the industry level and the lags of the interaction between HHI and the cost shocks. Second, we include industry-specific coefficients for the baseline effect of cost shocks by industry. As a result, the variation in concentration that we use to estimate our coefficients of interest is within industry. Therefore, the analysis is not subject to concerns that our estimation is simply picking up that more concentrated industries have a higher pass-through in the cross section.

We report our OLS estimates in Panel (b) of Figure 3. We interpret our results considering an HHI that has grown by 0.02, which corresponds to the increase in HHI that occurred from 2005 to 2018 (shown in Figure 1), the sample period we use in our estimation. We find that a cost shock of 1 percent causes a differential increase in prices above trend of approximately 0.10 percentage point for three quarters after the shock. Rescaling the differential effect of prices on cost changes for interpretation, as shown earlier, we find that the pass-through is 25 percentage points larger for three quarters following a 0.02 increase in the HHI.

3.1 Extensions and Robustness

We extend the analysis in various dimensions. For each extension, we provide only a brief description of the analysis and results here. More details are available upon request and will be included in the forthcoming companion paper.

Asymmetric Effects. It is possible that prices react differently to positive and negative cost changes. To understand if the pass-through of costs into prices is asymmetric, we separate positive cost shocks from negative cost shocks in our baseline specification. We find that, on average across industries, there is no differential pass-through of positive versus negative cost shocks. However, in terms of the differential effect of concentration, we find that in more concentrated industries positive cost shocks are more strongly passed through into prices relative to negative cost shocks, for which we do not find a significant differential effect of concentration.

Real Output. We extend our analysis of the level effect of cost shocks and the differential effect of industry concentration to industry output (deflated by industry specific prices). We find that a cost shock of 1 percent is associated with a 0.05 percent decrease in real output. Beyond its economic importance, this finding also lends credibility to our identification strategy of a supply effect. In terms of the differential effect of concentration, we find that the 0.02 increase in HHI observed during our sample period results in a twofold increase in output's response relative to the average response.

Robustness. We conduct a series of robustness tests. First, we replicate our analysis using the share of sales coming from the largest firms in a given industry as an alternative measure of concentration. Second, we use an alternative specification where we model year-over-year prices and costs (and cost shocks), instead of price and cost levels with autoregressive terms, as we do in our benchmark. Third, we consider alternative models to compute the cost shocks. Fourth, we replicate our analysis excluding sectors with fewer than 20 firms at any point in time. Fifth, we also consider alternative cost measures (such as the cost of goods sold). All of these tests produce results that are similar to our benchmark results.

4 Conclusion

Industry concentration has increased significantly in the United States in the past 20 years, and this trend has accelerated since the onset of the COVID-19 pandemic. We construct a measure of industry cost shocks from firm-level shocks and find that an increase in industry concentration is associated with a significant increase in the pass-through of costs into prices. Our findings shed some light on the current inflationary pressures and the linkages between inflation dynamics and rising market concentration. In particular, our results suggest that the recent rise in concentration is an amplifying factor for the pass-through of current cost shocks emanating from supply shortages, energy price shocks, and labor market tightness.

References

- Adrian, T., J. Berrospide, and R. Lafarguette (2020). Macrofinancial feedback, bank stress testing and capital surcharges.
- Baqee, D., E. Farhi, and K. Sangani (2021). The Supply-Side Effects of Monetary Policy. NBER Working Papers 28345, National Bureau of Economic Research, Inc.
- De Loecker, J., J. Eeckhout, and G. Unger (2020). The Rise of Market Power and the Macroeconomic Implications. *Quarterly Journal of Economics* 135(2), 561–644.
- Diez, F. J., R. A. Duval, I. Shibata, P. Engler, M. W. Chen, M. M. M. Tavares, C. Maggi, J. Fan, C. Villegas-Sánchez, and M. D. A. Schwa (2021). Rising Corporate Market Power: Emerging Policy Issues. IMF Staff Discussion Notes 2021/001, International Monetary Fund.
- Gabaix, X. and R. S. Koijen (2020). Granular instrumental variables. Technical report, National Bureau of Economic Research.
- Gabaix, X. and R. S. Koijen (2021). In search of the origins of financial fluctuations: The inelastic markets hypothesis. Technical report, National Bureau of Economic Research.
- Galaasen, S., R. Jamilov, R. Juelsrud, and H. Rey (2020). Granular credit risk. Technical report, National Bureau of Economic Research.
- Jordà, O. (2005, March). Estimation and inference of impulse responses by local projections. *American Economic Review* 95(1), 161–182.
- Mongey, S. (2021). Market structure and monetary non-neutrality. Working Paper 29233, National Bureau of Economic Research.
- Rossi-Hansberg, E., P.-D. Sarte, and N. Trachter (2018). Diverging trends in national and local concentration. Working Paper 25066, National Bureau of Economic Research.
- Syverson, C. (2019). Macroeconomics and market power: Context, implications, and open questions. *Journal of Economic Perspectives* 33(3), 23–43.
- Wang, O. and I. Werning (2020). Dynamic oligopoly and price stickiness. Working Paper 27536, National Bureau of Economic Research.

How Much Have Record Corporate Profits Contributed to Recent Inflation?

By Andrew Glover, José Mustre-del-Río, and Alice von Ende-Becker

Inflation ended 2021 at a 40-year high and rose further in 2022. Policymakers, politicians, and pundits have considered many possible explanations for this burst of inflation, from transitory supply chain disruptions to “wage-price spirals” to mismatches between demand and supply. However, one potential explanation that has received significant public attention is “greedflation”—that is, the idea that firms are capitalizing on their market power by raising their prices higher and faster than the growth in their production costs. This idea is well captured by Robert Reich’s May 17, 2022, testimony to Congress, during which he said, “When corporations are so flush with cash, why are they raising prices? They are not raising prices solely because of the increasing costs of supplies and components and of labor.... Corporations enjoying record profits in a healthy competitive economy would absorb these costs. Why? Because they *can*. And they can because they don’t face meaningful competition” (p. 2).

Although higher corporate profits have received attention recently, profits and inflation do not have a direct accounting relationship. However, inflation is directly affected by growth in the *markup*—the ratio between the price a firm charges and the firm’s current marginal cost of production. Inflation in a firm’s prices is therefore the sum of the growth in the marginal cost of production and the growth in the markup.

Andrew Glover is a senior economist at the Federal Reserve Bank of Kansas City. José Mustre-del-Río is a research and policy officer at the bank. Alice von Ende-Becker is a research associate at the bank. This article is on the bank’s website at www.KansasCityFed.org

Economic theory posits many ways that markups can change over time. For example, markups could change due to a decrease in the price sensitivity of consumer demand or an increase in monopoly power that arises from reduced competition. However, markups could also rise if current marginal costs become less important for a firm's pricing, either because current firms expect higher costs to replace current inventory as it is sold or because firms expect higher marginal costs in the future and want to smooth out price increases over time rather than raise prices sharply and abruptly. In this article, we estimate the 2021 growth rate of markups and discuss likely contributors to this growth. We find evidence that markup growth was a major contributor to inflation in 2021. Specifically, markups grew by 3.4 percent over the year, whereas inflation, as measured by the price index for Personal Consumption Expenditures (PCE), was 5.8 percent, suggesting that markups could account for more than half of 2021 inflation. Such high markup growth is especially striking given that markup growth contributed almost nothing to inflation in the decade leading up to the COVID-19 pandemic.

Although our estimate suggests that markup growth was a major contributor to annual inflation in 2021, it does not tell us *why* markups grew so rapidly. We present evidence that the timing and cross-industry patterns of markup growth are more consistent with firms raising prices in anticipation of future cost increases, rather than an increase in monopoly power or higher demand. First, the timing of markup growth in 2021, as well as earlier in the pandemic, does not line up neatly with the spike in inflation during the second half of 2021. Instead, the largest growth in markups occurred in 2020 and the first quarter of 2021; in the second half of 2021, markups actually declined. Therefore, inflation cannot be explained by a persistent increase in market power after the pandemic. Second, if monopolists raising prices in the face of higher demand were driving markup growth, we would expect firms with larger increases in current demand to have accordingly larger markups. Instead, markup growth was similar across industries that experienced very different levels of demand (and inflation) in 2021. This finding suggests that an increase in markups may provide policymakers with a signal of future inflationary pressures, especially if it occurs during periods where expectations of near-term future inflation are heightened.

Section I reviews the microeconomic theory of price setting by monopolists while holding constant marginal costs and demand. Section II presents our estimates of markup growth across time and industries. Section III extends the theory of pricing to one where firms must consider future marginal costs when setting current prices and demonstrates how an increase in expected future marginal costs translates to inflation through markup growth in the present followed by negative markup growth in the future.

I. Prices, Costs, and Markups in the Model of Monopolistic Competition

Rising monopoly power among firms has been a popular explanation for the 2021 spike in inflation, buttressed by a coincident rise in corporate profits. To help illustrate the mechanisms through which monopoly power can raise markups, Figure 1 first shows how markups are determined in a standard monopolistic model of price setting holding a firm's marginal costs fixed. The solid blue line shows that consumers' maximum willingness to pay (that is, their demand for the good) declines as they purchase more of a monopolistic firm's product. The dashed blue line shows that the marginal revenue a monopolist receives from each additional sale declines as they increase output. Finally, the solid green line plots the marginal cost of producing each unit sold.¹

A profit-maximizing monopolist chooses the price that equates marginal revenue to marginal cost, so any change in price would lead to a loss in profits. For example, in Figure 1, if the monopolist sets a unit price equal to \$4, consumers will demand (and purchase) three units. Because the monopolist's production cost is only \$1 per unit, they earn \$3 profit per unit for a total profit of \$9 and a markup equal to 4 ($\$4 / \$1 = 4$). This price equates marginal revenue to marginal cost and maximizes the monopolist's profit. If the monopolist decides to lower the price to \$3, they would sell four units instead of three, but their profit per unit would fall to \$2 for a total profit of \$8 instead of \$9 and a markup of 3. Similarly, if the monopolist raised the price to \$5, then they would make \$4 profit on each unit but sell only two units at that price for a total profit of \$8 and a markup of 5.

Figures 2 and 3 illustrate how markups and costs jointly determine inflation by showing how the monopolist will increase their price in

Figure 1
Price Setting by a Monopolist

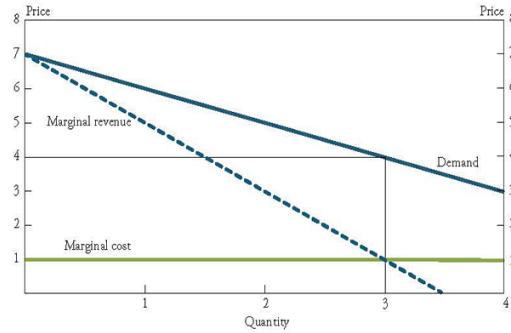
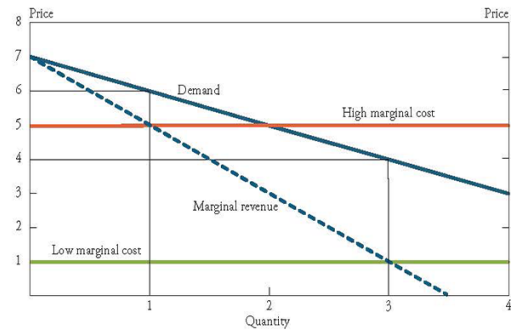
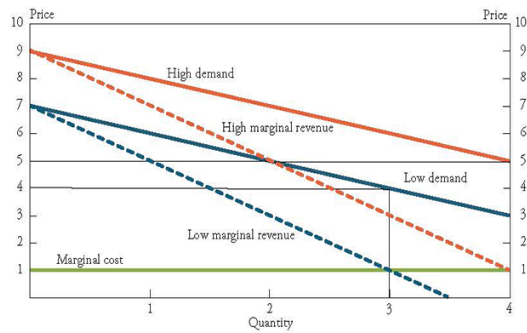


Figure 2
Effect of Higher Marginal Cost on Monopolist Pricing



response to either an increase in the marginal cost or an increase in demand. Figure 2 shows that an increase in the firm's marginal cost from \$1 to \$5—represented by the solid orange line—will raise the unit price by \$2, from \$4 to \$6. In this case, the firm's markup declines from 4 to 1.2 ($\$6 / \$5 = 1.2$); even though the price level increases, it is driven by the increase in marginal cost and markup growth is actually negative. In contrast, Figure 3 shows that an increase in demand—represented by the solid orange line—causes prices to grow from \$4 to \$5.

Figure 3
Effect of Higher Demand on Monopolist Pricing



In this case, the firm's markup increases from 4 to 5, so the increase in the price level in Figure 3 is entirely due to the firm's markup growing.

In summary, changes in firms' current marginal costs or demand for their products can contribute to inflation as firms adjust their prices to maximize profits. The total change in prices can always be understood as the combined effects of changes in the marginal cost of production and changes in the firm's markup. Our simple model shows that markups may or may not contribute to inflation: when a monopolist's marginal costs increase, markups decline, but when demand for a monopolist's products increases, markups rise.

II. Estimates of Average Markups

Although the figures in the previous section provide simple illustrations of firm markups, measuring the growth rate of these markups in the real economy can be challenging. First, data on a firm's marginal cost of production are not available; instead, we can only observe measures of total costs in nominal values. Second, data collected at the firm level do not report the prices that firms charge or the quantity of goods they produce, but rather their total sales.

To overcome these challenges, we estimate the growth rate in markups by assuming that firms equate their marginal cost to a constant proportion of the production costs that they can control—specifically,

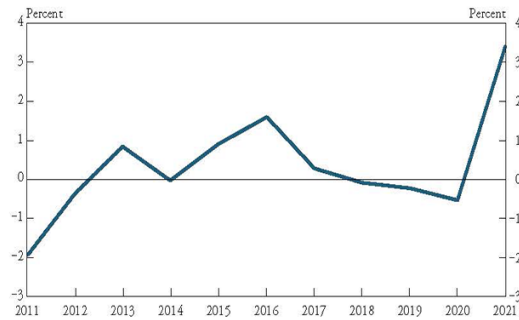
variable costs, which include things like labor and utilities, rather than fixed costs, such as depreciation on previously installed capital. This assumption allows us to proxy a firm's markup growth using the growth in its ratio of sales to variable costs. We estimate markup growth using Compustat data, which consist of quarterly data at the firm level for publicly traded corporations in the United States. These data have been used widely to estimate markups (as in De Loecker, Eeckhout, and Unger 2020) and have two main benefits. First, they allow us to estimate markups at the firm level and then calculate averages at different sectoral levels of aggregation. Second, they include a direct estimate of total variable costs, "cost of goods sold," which is our basis for estimating markups.²

The blue line in Chart 1 plots average markup growth across all firms from 2011 through 2021, weighted by share of total sales. The chart shows that after remaining roughly flat in the decade preceding the pandemic and falling by 0.5 percent in 2020, markups grew by about 3.4 percent in 2021. This is more than half of the 5.8 percent PCE inflation rate, suggesting markup growth played a major role for inflation in 2021.³ Furthermore, the burst in markup growth seen in 2021 stands in marked contrast to the decade before the pandemic, when marginal cost growth drove inflation and markup growth averaged only 0.42 percent (less than one-third of average PCE inflation over that period).

Looking at the timing of markup growth tells a more nuanced story. Chart 2 shows quarterly markup growth plotted against quarterly PCE inflation. We estimate that quarterly markup growth was highest in 2021:Q1, when it neared 16 percent (annualized), while quarterly inflation was only 4.6 percent. Furthermore, markups fell in the second half of 2021, while inflation accelerated. This suggests that the source of high markup growth in recent years was not a steady increase in monopoly power.

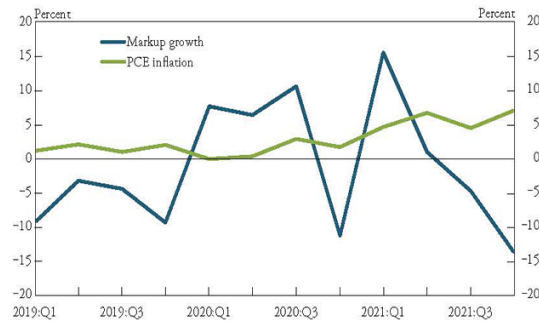
As shown in the previous section, changes in demand can also drive markup growth, even if monopoly power is unchanged. However, if high-frequency changes in demand were generating fluctuations in markup growth, then we would expect industries with higher demand to have both higher inflation and higher markup growth than those with less demand.

Chart 1
Growth Rate in Markup Estimates



Sources: Compustat and authors' calculations.

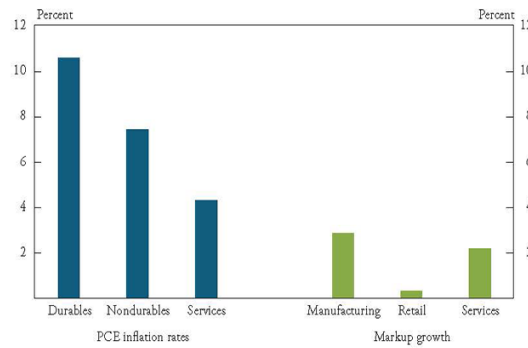
Chart 2
Quarterly Aggregate Markups and PCE Inflation



Sources: Bureau of Economic Analysis (BEA), Compustat, and authors' calculations.

We check for this pattern using the industrial detail of our Compustat markup measure. Goods and services experienced different rates of inflation in 2020 and 2021, as shown in the first three bars in Chart 3. Durable goods inflation spiked sharply to nearly 11 percent, nondurable goods inflation grew by 7.4 percent, and services inflation remained relatively low at 4.3 percent. These differences likely reflect shifts in relative demand in the face of ongoing COVID-19 risk in 2021, as spending on durable goods has a relatively low risk of infection compared with spending

Chart 3
Sectoral Inflation and Markup Estimates



Sources: BEA, Compustat, and authors' calculations.

on services. However, the green bars in Chart 3 show that the pattern for markup growth in roughly comparable industries was much more similar. Markups grew only slightly more in manufacturing (2.90 percent) than in services (2.20 percent), and retail saw the smallest growth in markups (0.33 percent). The similarity of markup growth despite large differences in inflation speaks against a simple demand-based explanation in which markups drove inflation most for industries that experienced the strongest increase in relative demand due to the pandemic.

III. Higher Future Marginal Costs Increase Markups When Pricing Is Dynamic

Although markup growth was high in 2021, the evidence from the previous section casts doubt on the simple explanation of “greedflation,” understood as either an increase in monopoly power or firms using existing power to take advantage of high demand. Instead, this evidence may be consistent with an alternative explanation: that firms are raising markups in the present to smooth price increases they expect in the future. Indeed, both the hump shape of aggregate markup growth and similarity in markup growth across industries arise naturally in standard macroeconomic models where firms adjust their prices slowly over time and expect high marginal costs in the near-term future.

To understand how markups can rise in response to an increase in firms' expectations of higher marginal costs in the future, we extend our theory of price setting to one with multiple periods of production and sales as well as "sticky" prices. We consider a firm that has a marginal cost of \$1 at the beginning of the year (as in Figure 1) but expects their marginal cost to rise to \$5 in the next year (as in Figure 2). However, we assume that this firm will only set its price once for both years, either because it is costly to adjust prices or because consumers dislike frequent price changes. Of course, this illustrative model cannot also generate inflation after markups have fallen, as we see in the data, but we extend it to a longer horizon below.

Figure 4 demonstrates profits as the firm considers prices between \$4 (which maximizes profits given a constant marginal cost of \$1) and \$6 (which maximizes profits given a constant marginal cost of \$5). Using either price of \$4 or \$6 for both periods generates a total profit of \$6. However, if the firm sets a price of \$5, then profits rise to \$8. Effectively, this balances the average of the marginal cost between the two years to the marginal revenue, thereby maximizing total profit. Markups are therefore higher initially—when the marginal cost is \$1, firms set a price of \$5, leading to a first-year markup of 5 rather than 4. However, markups fall in the second year—when marginal costs rise to \$5 and the price remains at \$5, then the markup is equal to 1. In other words, the firm just breaks even on the last unit sold in the second year.

Although this simple example illustrates how higher future marginal costs can increase inflation in the present via markups, it is much simpler than the dynamic equilibrium models used by policymakers, which allow firms to engage in many periods of price setting, households to make consumption and labor supply decisions (which determine firms' demand and wage costs), and monetary policy to change interest rates in response to inflation (which affects household spending). Figure 5 demonstrates inflation (blue line) and markup growth (green line) from such a model in which prices, output, and interest rates are all determined jointly in equilibrium following a monetary policy rule that leads the central bank to raise interest rates when inflation rises. In this simulation, firms realize that marginal costs will rise by 10 percent in a year and then shrink slowly, returning to normal after two years. In anticipation, they begin raising prices immediately,

Figure 4
Monopolist Profit from Fixed Price over Two Years

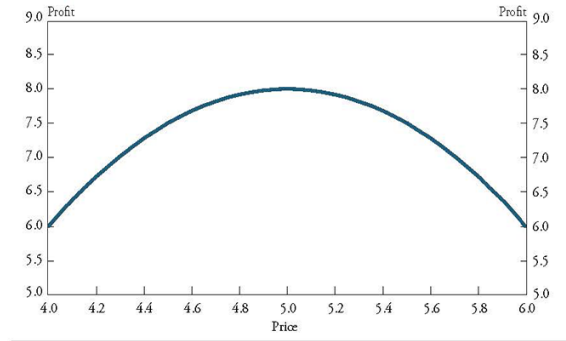
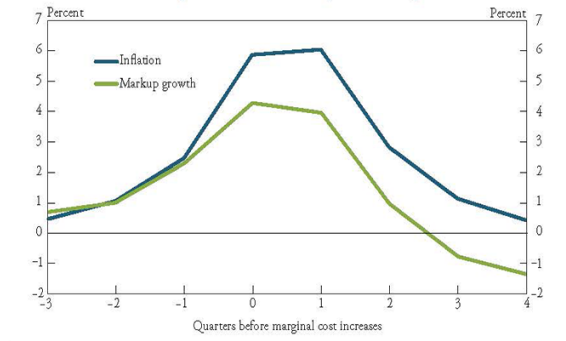


Figure 5
Inflation and Markup Growth from Dynamic Equilibrium Model



which translates into markup growth and inflation. Furthermore, in the model, the increase in inflation elicits an increase in interest rates by the central bank, which in turn lowers employment and reduces marginal costs (through lower real wages). The result is that markup growth initially accounts for more than 100 percent of inflation, which is why the green line is initially above the blue line. Once marginal costs rise, however, inflation is higher than markup growth, and eventually markups begin to shrink. The qualitative pattern of markup

growth's contribution to inflation is remarkably similar to the quarterly pattern of inflation and markup growth in 2021. Furthermore, the initial markup-driven increase in inflation foreshadows the later increase in marginal costs and signals a persistent rise in inflation. Overall, this example's accordance with the quarterly data from 2021 suggests that the large contribution of markups to inflation in 2021 may have been a harbinger of the continued inflation observed in 2022.

Conclusion

As inflation has remained stubbornly high, economists and policymakers have sought to better understand the contribution to price gains from direct increases in marginal costs versus increases in firms' markups. We show that markup growth likely contributed more than 50 percent to inflation in 2021, a substantially higher contribution than during the preceding decade. However, the markup itself is determined by a host of unobservable factors, including changes in demand but also changes in firms' expectations of future marginal costs. The decline in markups during the first half of 2022—even as inflation remained high—is consistent with firms having raised markups during 2021 in anticipation of future cost pressures. Furthermore, the growth in markups was similar across industries with very different relative demand and inflation rates in 2021, which is also consistent with an aggregate increase in expected future marginal costs. We conclude that an increase in markups likely provides a signal that price setters expect persistent increases in their future costs of production.

Endnotes

¹We use a constant marginal cost for simplicity, but it is not required for our empirical work.

²Cost of goods sold is defined by the Internal Revenue Service as “the costs incurred by the corporation in producing the goods or providing the services that generated the corporation’s business receipts.” While it may sound straightforward that this measure proxies well for variable cost, Traina (2018) argues that one should include other expenses, such as marketing and management costs, as well. We have done our analysis with Traina’s alternative measures of variable costs and found similar results for 2020–21.

³We say that our estimates suggest that markup growth made a large contribution to PCE inflation because our average markups use different weights than PCE. Specifically, we calculate the average markup in Compustat using each firm’s markup weighted by its share of total sales, while the PCE price index weights prices using consumption expenditures.

References

- De Loecker, Jan, Jan Eeckhout, and Gabriel Unger. 2020. "The Rise of Market Power and the Macroeconomic Implications." *Quarterly Journal of Economics*, vol. 135, no. 2, pp. 561–644. Available at <https://doi.org/10.1093/qje/qjz041>
- Reich, Robert B. 2022. "Corporate Profits Are Soaring as Prices Rise: Are Corporate Greed and Profiteering Fueling Inflation?" Testimony to the U.S. Senate Budget Committee, April 5.
- Traina, James. 2018. "Is Aggregate Market Power Increasing? Production Trends Using Financial Statements." Stigler Center for the Study of the Economy and the State, New Working Paper Series no. 17, February. Available at <https://doi.org/10.2139/ssrn.3120849>