



Does Anyone Know What Paper Towels Should Cost?

Online shopping was supposed to give consumers more power and freedom. Instead, costs are so fluid that household goods fluctuate almost like Bitcoin.



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When a holiday toy catalog from Amazon arrived in the mail in late October, Krista Hoffmann noticed something amiss.

In 100 pages of Lego sets, princess castles, action figures and the impossible-to-find Sony PlayStation 5, the catalog presented just about everything — except the prices.

“At first, I thought I wasn’t looking close enough, so I flipped through a few more pages,” said Ms. Hoffmann, a stay-at-home mother of three children in Colorado Springs. “Then I realized, ‘Oh, this is intentional.’ Why would you not put the prices there?”

The absence of prices was not an oversight; it was the natural evolution of two decades of online shopping.

In the early days of the internet, there was breathless excitement that e-commerce would lead to greater price transparency, allowing shoppers to know exactly where to find the best deals. This was supposed to be good for consumers and bad for retailers forced to compete with one another in a profitability-killing race to the lowest prices.

Instead another reality has emerged: Shoppers are losing sight of what things cost.

Retailers have an incentive to shift the lens away from prices, dangling other carrots like convenience and ease of use. At the same time, shoppers are increasingly overwhelmed by the complexity of product options, prices, discounts and payment plans.

Beyond that, it's not an easy time to be a consumer. The pandemic has transformed shopping habits. Shortages of everyday items like toilet paper and disinfectant spray were a painful reminder of the fragility of supply chains — an issue that consumers are still grappling with as they face delays for everything from furniture to cars. It has contributed to price volatility, exacerbated by inflation at its highest levels in four decades — driving up the costs of energy, food and housing.

All of this is happening on top of a system, pioneered by Amazon, that keeps prices in algorithm-fueled motion.

When Amazon raises and lowers product prices millions of times a day using a complex algorithm based on competitors' prices, supply and demand, and shopping habits, its rivals often follow suit. And because prices swing so frequently, Amazon's catalog can't promise a specific price and consumers have to track the swings if they want the best deals.



Krista Hoffmann was shopping for Christmas gifts when she noticed that an Amazon catalog didn't list prices. David Williams for The New York Times

Glenn Ellison and Sara Fisher Ellison, economics professors at the Massachusetts Institute of Technology, published a 2018 paper that said while technology had made searching for products easier, retailers had pushed back by obfuscating prices — often a precursor to higher ones.

“To the extent that there is more obfuscation going on, consumers pay more for everything,” said Glenn Ellison, adding that consumers also waste time hunting for deals or select an alternative that isn't quite what they wanted. “For consumers, it is almost exclusively negative.”

That description — “almost exclusively negative” — is how Ms. Hoffmann, 29, felt about holiday shopping.

“I had to scan each individual item and hope that the prices didn't fluctuate while I compared them to other stores,” she said.

Amazon's price for the Pokemon Celebrations Elite Trainer Box, a wish list item of Ms. Hoffmann's 7-year-old son, seesawed in the weeks before Christmas. There were at least 14 changes since August, ranging from the suggested retail price of \$49.99 to \$89.99 in October. The average during that period was \$67.12, according to Camelcamelcamel, which tracks prices on Amazon.

When she noticed the absence of prices, Ms. Hoffmann questioned why on Twitter. An Amazon customer service account promptly responded, explaining that the prices change constantly because Amazon “works toward maintaining competitive prices on everything we carry.”

In a statement about its pricing practices and price fluctuation, Patrick Graham, an Amazon spokesman, said the company’s systems benchmark prices in other stores to ensure customers get the best price from Amazon.

“If we find a better price at another retailer, like Walmart, Target, Home Depot and others — we systematically match or offer a more competitive price if we are selling the product ourselves,” he said.

Like many of the other toys on Ms. Hoffmann’s children’s wish list, the Pokemon box directly offered by Amazon was sold out. Some third-party sellers, who pay Amazon a fee to list products on its website, were charging exorbitant prices. So Ms. Hoffmann bought a different box of Pokemon cards from Target on Black Friday.

Dynamic pricing — when prices move in accordance with market conditions — is just one reason people lose touch with what things cost.

Discounts tied to loyalty programs or annual subscriptions like Amazon Prime and Walmart+ also complicate the math. At the same time, features meant to save time and enhance convenience, such as automated monthly deliveries of household goods, have made shoppers less price aware.

“The general playbook for the post-2000s with retail is that everything is about obfuscating prices,” said Jason Murray, who worked at Amazon for 20 years and is now chief executive of Shipium, an e-commerce start-up. “This is the game that companies are playing by removing the reference points so people think they’re getting a good price.”

Retailers and brands are bombarding shoppers with discounts, one-time offers and different gimmicks that overwhelm them with numbers while giving the impression that they are getting a good deal. And even when price comparison is easier and more prevalent, such as for airline tickets or hotel reservations, consumers get an incomplete picture of the actual cost because of add-on fees.

“We’re flooded with so many prices, an inundation of numbers, that it’s hard for any specific numbers to really stick,” said Nick Kolenda, an author and a creator of YouTube videos about consumer psychology and tricks played by marketers to induce shoppers.

The prices of some goods, like gasoline, a cup of coffee or a gallon of milk, are easier to remember because people buy them regularly and in person. When shopping happens online, the picture can become hazy — although the experience may not be universal, especially for people living on limited means.

“Losing track of prices has a lot to do with how sensitive a given household budget is,” said Chi-En Yu, who runs Goodbudget, a budget tracking app. “If your household is quite sensitive to the prices of consumer goods, then on some level you don’t have the luxury of losing sight of prices.”

It may also indicate that wealthier consumers tend to shop more online. Unlike physical stores, where changing prices can be laborious, the internet provides the perfect sandbox for experiments on exactly what consumers are willing to pay.

In 2000, Amazon sparked outrage when it was found to be charging different prices for the same DVDs only moments apart. (Amazon charged one customer \$65 for a “Planet of the Apes” DVD and another shopper \$75.) Jeff Bezos, then Amazon’s chief executive, apologized for creating buyer uncertainty with a “random price test.”

While Amazon said it did not practice discriminatory pricing — charging different people different prices based on demographics — it is all in on dynamic pricing. Profitero, an e-commerce analytics firm, estimated in 2013 that Amazon tweaked prices 2.5 million times a day. (It is safe to assume that the number has grown.)



WowWee's Got2Glow Fairy Finder was one of the toys Ms. Hoffmann's children spotted in the Amazon toy catalog. David Williams for The New York Times

The result is that prices for household goods swing back and forth and, at times, are subject to price surges more commonly found in ride-hailing services.

“The problem today is that you don’t have any idea whether prices are going up or down. It’s like the stock market,” said Venky Harinarayan, a partner at Rocketship.vc, a venture capital firm. He was an early employee at Amazon and helped Walmart with its pricing technology.

Even paper towels are subject to Bitcoin-like volatility. A year ago, a 12-roll pack of Bounty paper towels was selling on Amazon for around \$30, according to Camelcamelcamel. The price dropped to \$23 in April and then jumped to \$35 in October. This past week, it settled around \$28.

For the deal-hungry shopper, the time saved shopping online and avoiding stores has been replaced by time spent scouring the internet for a bargain.

The transition to a cashless economy has also dulled the psychological pain of paying, said Ravi Dhar, a behavioral scientist and professor at the Yale School of Management. Digital payments and credit cards make transactions so devoid of friction that people lose awareness of their spending.

According to a 2009 research paper by Amy Finkelstein, an economics professor at M.I.T., when people use cash less, prices go up. Dr. Finkelstein studied what happened when states introduced electronic toll collection. After enough drivers installed the toll readers in their cars, she estimated, tolls became up to 40 percent more expensive than they would have been if only cash were accepted.

As part of her research, Dr. Finkelstein said, she asked drivers at a rest stop on the Massachusetts Turnpike how much they paid at the tollbooths that they had just passed. She found that 85 percent of people who had paid electronically got the price wrong, compared with only 31 percent of people who had paid cash.

“The people paying electronically had no idea what they were paying,” Dr. Finkelstein said.

Even for price-conscious shoppers, it’s getting challenging to keep tabs.

“Your average person isn’t going to know what’s the right price, what to spend, what to buy and when,” said Mike Stouber, 32, of Freehold, N.J. “It’s become so analytical and so much based on numbers that the normal person is not going to realize or pay attention.”

Mr. Stouber, a vice president at a communications firm, is no ordinary price-conscious shopper. He’s a ringer.

On “The Price Is Right” in 2019, he took home \$262,743, the most money ever awarded to a daytime contestant. He made it to the show stage with the closest price estimate for a diamond tennis bracelet. Then, in a game called Plinko, he accurately guessed the prices for a hair dryer, a humidifier and a video game console to win more chances at cash prizes. (He failed to guess the correct price of a digital meat thermometer.)

These days, Mr. Stouber plays a different type of game with the fluctuating prices on Amazon. He ordered shower and sink fixtures for a bathroom renovation from Amazon in February last year. When he noticed a month later that the prices for the products were significantly cheaper, he contacted the company to see if it would refund the difference — something other stores do.

Amazon refused. So he returned the fixtures and bought them again at the lower price. Since he is an Amazon Prime customer, the shipping was free, and he saved \$80.

“Consumers want a deal, and companies want to figure out a way to get the most money out of you,” Mr. Stouber said. “It’s a game. It really is just a game.”