

Less for More: “Shrinkflation” Cartels and Plus-Factor Analysis

BY HENRY VISSER MELVILLE

AS AMERICANS BATTLE HIGHER COSTS for everyday goods, even products that stay the same price may be shrinking. This phenomenon, where a product that appears to maintain its price actually increases its per-unit price due to shrinkage, is called “shrinkflation.” Consumers often do not notice the resulting per-unit price increase. Shrinkflation is particularly common in food products, which made up 9.7% of consumer spending in 2025.¹ Indeed, absent shrinkflation, food-price inflation would have been 3.9% lower between 2012 and 2021.²

As an example, a chocolatier might put fewer chocolates in a container or reduce the size of a tub of fudge while keeping the price the same. Depending on the chocolate’s signage, the package information, and consumers’ attention to detail, consumers may not notice the change quickly or at all. If the packaging is opaque and hides the reduced quantity, consumers may notice the change only if they remember the old weight printed on the package or if they can feel the difference in the product. Neither of these options is particularly feasible for consumers, whose attention is rarely focused on exactly how much their chocolate weighed during their last shopping trip.

Shrinkflation can also exacerbate inflation because companies may reduce product sizes in addition to, or instead of, increasing prices when faced with higher production costs in high-inflation environments. This choice is attractive because consumers are more sensitive to a price increase than to a product-size reduction.³ So if a company reduces product sizes instead of increasing prices and consumers do not notice, it can keep its market share, or even increase its share if competitors increase prices rather than reducing

product sizes. A company may also decide to shrinkflate its products to increase its margins. Since consumers may not respond to the shrinkflation, it gives companies the opportunity to increase margins without losing market share.

Beyond unilateral-conduct concerns, shrinkflation is a ripe area for collusion because companies may be able to reap outsized profits without public backlash from higher prices. By extending their shrinkflation to a cartel, companies can further increase their profits while evading attention. Plaintiffs alleging shrinkflation cartels will face many of the same hurdles as plaintiffs alleging a regular cartel. But the way consumers respond to shrinkflation will change the analysis for the actions-against-self-interest, demand-elasticity, and price-signaling plus factors.

The danger that shrinkflation will be used by companies and cartels to take advantage of consumers is great. Consumers should be on the lookout for cartel behavior, and legislatures may want to propose rules to protect consumers even in the absence of a cartel. This article touches on the dangers of unilateral shrinkflation for consumers, which is properly a target for state or federal consumer-protection laws, but fully examining those dangers is beyond this article’s scope. Instead, this article focuses on the risk of collusive shrinkflation and how litigants will need to adapt their analyses to shrinkflation’s characteristics.

Shrinkflation can also affect non-consumer goods sales, but businesses often watch their input costs closely or already purchase inputs on a per-unit basis, so they (the businesses) are more likely to spot shrinkflation. While a shrinkflation cartel in non-consumer goods is possible, this article focuses on consumer goods and how consumers react to shrinkflation.⁴

How Consumers Respond to Shrinkflation.

Shrinkflation’s most beneficial characteristic for companies is that it does not strongly affect consumer behavior. For both small and large package-size reductions, elasticity of demand is centered around one, which means that a 1% decrease in package size results in a 1% decrease in overall volume sold of the product.⁵ This means that the same number of units are sold after the package shrinks, with the 1% decrease in package size accounting for the 1% decrease in total volume sold. Therefore, changes in consumer behavior are not causing the decrease in volume sold, and demand is not responsive to changes in package size. And this elasticity does not change with the size of the reduction.⁶ Rather, consumers purchase the same number of items of the product or slightly increase their consumption.⁷ However, the total volume sold in response to shrinkflation remains unchanged or decreases slightly.⁸

The upshot for companies is that consumers do not respond strongly to reduced package sizes. But, while this makes shrinkflation attractive, there are long-term dangers for a company’s brand. While consumers don’t like price increases, they may view a price increase in response to a

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cost increase as fair, whereas they may view shrinkflation in the same situation as deceptive.⁹ And once consumers feel deceived, they are less likely to buy from that company again.¹⁰ Nowadays, this effect can be amplified by social media, leading to severe harms for companies that consumers feel are shrinkflating unfairly. Companies recognize this by shrinkflating less in states that have unit-price laws, which help reveal shrinkflation to consumers,¹¹ although unit-price information only minimally increases consumer responses.¹² Consumers may also be more likely to notice shrinkflation if multiple companies shrinkflate the same product line; each consecutive shrinkage increases the chance that consumers, wary or unwary, will notice the change. This is dangerous for companies shrinkflating unilaterally, as consumers may be more likely to adjust away from the company's products if they can, and for shrinkflation cartels, which may be increasingly likely to be noticed as more companies join the cartel.

Shrinkflation's effects are especially attractive for companies that compete online. Consumers shopping online tend to be highly price-sensitive, especially in low-quality goods,¹³ due to the low search costs they face online. To avoid this price sensitivity, companies may have the ability to obfuscate prices through various strategies,¹⁴ including shrinkflation.

However, other research indicates that shrinkflation intensifies price competition, which would make shrinkflation a bad choice for companies looking to increase profits.¹⁵ If consumers do respond to shrinkflation, then companies in oligopolistic markets may just use package sizes as an additional medium of competition.¹⁶ Since shrinkage would intensify price competition, companies would want to avoid starting shrinkflation competition. However, companies' actions indicate that the benefits of shrinking products outweigh the risks of intensified competition; companies do shrinkflate their products. The average size of packaged-food products decreased by 7.24% between 2012 and 2021.¹⁷

A unilateral package-size reduction is not illegal, but coordination between competitors to shrink package sizes is a cartel. While the behavior that the cartel is coordinating is unconventional, a shrinkflation cartel is the same as a regular price-inflating cartel. In a regular cartel, package size is unchanged while the price is increased, leading to a per-unit price increase. The same result is reached when price is unchanged and the package size is decreased. Indeed, courts have found far more unusual terms than unit prices to be essentially price terms.¹⁸ But a shrinkflation cartel is more nefarious since it is harder to detect, so antitrust regulators and consumers should be on the lookout for coordinated packaging changes.

Shrinkflation Cartels.

Unilateral shrinkflation, like a unilateral price increase, is legal outside of certain circumstances discussed below. The key for plaintiffs alleging a shrinkflation cartel is showing

that the defendants' shrinkflation was the result of an agreement rather than unilateral conduct or conscious parallelism. While shrinkflation cartels produce the same per-unit price effects as regular price-fixing cartels, the antitrust analysis will be different because of how consumers respond to shrinkflation. In particular, consumer response will affect the plus-factor analysis, the admissibility of certain expert statements, and the shape of injunctive relief. While some cases, such as *In re Packaged Seafood Products Antitrust Litigation*,¹⁹ have included allegations of package shrinking in addition to price and quantity restrictions, the size reductions themselves have rarely been central to those cases. And those cases that have included allegations related to package-size reductions lack many reported decisions, but they still provide a few valuable lessons.

In *In re Pre-Filled Propane Tank Antitrust Litigation*,²⁰ purchasers of pre-filled propane tanks sued the two largest providers of those tanks for colluding to reduce tank size from 17 pounds to 15 pounds without a corresponding price decrease.²¹ The court held that allegations of reduced tank filling could state a claim for a price-fixing conspiracy:

The allegations of a price-fixing conspiracy are sufficient. Plaintiffs plead that Defendants "conspired and acted in concert to eliminate competition by reducing the amount of propane they would put in their tanks, thereby raising the per-pound price of propane across the country as well as by dividing the market for Filled Propane Exchange Tanks in violation of federal antitrust law."²²

This case is also an excellent example of a size decrease that is difficult to notice; unless the consumer is a particularly lavish user of propane tanks, they might not notice that the weight has changed since the last time they purchased a tank. If the FTC had not investigated the tank providers after they tried to strong-arm Walmart into accepting the smaller tanks, the case might never have come to light. While the FTC did not allege that the suppliers colluded to reduce the tank sizes, the FTC's statement and Commissioner Ohlhausen's dissent both acknowledged that reducing product size while maintaining price is a per-unit price increase.²³

The plus-factor analysis in *Packaged Seafood* used the traditional pricing lens, and *Pre-Filled Propane* did not reach a point where the court could opine on plus factors. But in *In re McCormick & Co., Inc., Pepper Products Marketing & Sales Practices Litigation*, plaintiffs alleged that McCormick and its retailers conspired to reduce the amount of pepper in canisters manufactured by McCormick,²⁴ and the court analyzed certain plus factors through a shrinkflation lens.²⁵ While the court dismissed the plaintiffs' antitrust claims for failure to state a claim,²⁶ the McCormick Pepper court's analysis can be combined with litigants' usual plus-factor arguments to suggest what opportunities and hurdles the plus-factor analysis presents.

Plus-Factor Analysis. As noted above, one of the most important parts of a price-fixing case is the plus-factor

analysis. Evidence of price fixing can be either direct, such as an email chain in which the parties agree to fix prices, or indirect, such as economic observations about companies' behavior. Indirect evidence is more common because price-fixers often know better than to generate convenient direct evidence. But indirect evidence alone is insufficient to establish liability, because some price-setting behavior may be motivated by either individual self-interest or price-fixing schemes. So making a determination of liability based on indirect evidence requires the court and the fact-finder to make an inferential leap from conscious parallelism, which is not an antitrust violation, to collusion; plus factors help them make that leap.²⁷

The Supreme Court first articulated antitrust plus factors in *Interstate Circuit, Inc. v. United States*,²⁸ and they have been developed by courts since then. There is no comprehensive list of plus factors, but commonly cited ones are market concentration, entry barriers, inelastic demand, substitutes, and product homogeneity.²⁹ The analysis for most plus factors does not vary depending on whether the claim is traditional price fixing or shrinkflation price fixing. For example, product homogeneity facilitates fixing a single price (or unit price) regardless of whether the fixing is accomplished by setting price or by setting product size. Similarly, plus factors related to the formation of a conspiracy, such as opportunity to conspire, invitations to collude, and a high number of intercompetitor communications, would not change based on the medium of collusion.

But three commonly cited plus factors interact with shrinkflation in a more-complex way that litigants will want to consider: actions against self-interest, demand elasticity, and price signaling.

1. Actions Against Self-Interest. One of the most important plus factors is whether the actions of the cartel members make sense in the absence of a cartel. For example, a single company risks losing market share to competitors if it increases prices unilaterally; consumers would switch to the company's competitors. While product characteristics like heterogeneity can weaken this dynamic, courts generally recognize that any particular firm would be worse off if it unilaterally increased prices.³⁰ But if the companies in a market coordinate their price increases, consumers have no choice but to pay the higher price or skip buying the product.

While actions against self-interest are an important plus factor, they are not sufficient on their own. This is because oligopolistic competition may lead companies to make unilateral price-maximizing decisions that would not be price-maximizing if the other companies did not follow.³¹ This means that, in a market with more competitors, individual competitors do not notice each other's pricing decisions, or the number of competitors may otherwise facilitate strong price competition. However, in an oligopolistic market, the competitors take each other's decisions into account, leading to a higher equilibrium price. Absent an agreement between competitors, this is not illegal; it is

conscious parallelism.³² So plaintiffs must allege other plus factors to show that the actions against self-interest are the result of an agreement not to compete rather than conscious parallelism.³³

Nonetheless, in the main actions-against-self-interest analysis, shrinkflation-cartel defendants can argue that it is in their individual self-interest to shrinkflate because they will reap greater profits until consumers notice the shrinkflation, which can take a long time. Consumers purchase the same number of items or slightly increase their consumption in response to shrinkflation,³⁴ so companies can increase their profits unilaterally. This dynamic was recognized by the *McCormick Pepper* court, which noted that "[r]etailers could well have expected that most consumers would be insensitive to the precise amount of pepper in a container and therefore willing to pay the same retail prices as before."³⁵

In turn, plaintiffs will want to show that it is only in a firm's short-term self-interest to shrinkflate. In the long term, consumers will switch away from the shrinkflating company based on the reduced package size and higher per-unit price. And shrinkflating also may make consumers less likely to purchase the company's products in the future. Plaintiffs will want to point out that cartel members often sacrifice short-term profits for long-term ones, so it is illogical for defendants to now argue that shrinkflating is in their individual self-interest because it generates short-term profits when those shorter-term profits are negated by long-term losses.³⁶ Indeed, one strategy for punishing defecting cartel members, lowering prices to force the defector to lose profits as well, is entirely based on cartel members' willingness to forego short-term profits to punish defecting cartel members and keep long-term profits from the cartel high.³⁷

Separately, plaintiffs can ask their experts to show that shrinkflation intensifies price competition, so shrinkflation is a bad choice for companies looking to unilaterally increase profits.³⁸ The resolution of these arguments will ultimately depend on the characteristics of the product and which party's expert can convince the court and the jury of the direction that the company's self-interest points.

2. Demand Elasticity. Inelastic demand allows a company with market power to increase prices without losing significant sales, because consumers in such a market do not alter their buying habits strongly in response to price changes.³⁹ So, on the same principle, a cartel in a market with inelastic demand will be more profitable and is more likely to form. Demand elasticity is a relevant market characteristic in all cartel cases, but the way shrinkflation affects consumers' choices makes it particularly relevant.

In normal cartel litigation, each expert witness opines on the market's demand elasticity as part of their expert report. The experts in a shrinkflation case will need to further opine on how the market's demand elasticity will change if consumers are not even aware of the price change they are experiencing.

Plaintiffs will want to argue that the natural demand elasticity of the product market at issue is made more inelastic by the psychological effects of shrinkflation. In the case of a product with inelastic demand, plaintiff's expert will want to show that the innate inelasticity of the demand for the product does not disappear when shrinkflation infects the market; it simply becomes more inelastic. This makes the market even more susceptible to cartelization because it makes the cartel even more profitable. And in the case of a product with more elastic demand, it may allow a cartel to form profitably where it could not normally form because consumers would substitute away. In the *McCormick Pepper* court's analysis of actions against self-interest, the court noted that the defendants likely expected consumers not to respond to an obscured quantity change,⁴⁰ which serves as an implicit recognition of these elasticity effects.

3. Price Signaling. Classic price signaling involves public announcements, often in advance, of price changes. This does not apply any more to shrinkflation price fixing than it does to classic price fixing. Generally, announcements are for business-to-business products, such as titanium dioxide, containerboard, and caustic soda,⁴¹ and are wide-scale announcements rather than changes to the price at a store. These price announcements usually include prices per quantity anyway, so a cartel that shrinks quantity and a cartel that increases prices directly would be analyzed under this factor the same.

But consumer-focused goods may have a different analysis under this factor because some laws aimed at protecting consumers from shrinkflation require companies to post per-unit prices, making it easier for cartels to police behavior. A discussion of shrinkflation-focused consumer-protection laws is included below, but, in short, eighteen states and the District of Columbia have some form of unit-pricing law or regulation.⁴² These laws generally require stores to display unit price on the product's shelf, packaging, or signage.⁴³ Packaging laws aimed at shrinkflation have also been passed in France, Austria, Hungary, and Romania. South Korea has a unique law which requires that any reduction in package volume or weight be posted on packaging and on the company's website for three months.⁴⁴

The United States' unit-pricing laws have the interesting effect of making it impossible for a member of a classic price-fixing cartel to undercut the agreed-upon price by secretly shrinkflating, while also making it easier for a shrinkflation cartel to police itself. Of course, these effects only manifest on the shelves of supermarkets, and cartels often opt for more technologically sophisticated forms of policing as computer algorithms continue to change the opportunities for collusion.⁴⁵

South Korea's three-month requirement has its own pros and cons. Requiring reductions in package volume or weight to be posted for three months leaves a clear trail of price changes over time that can be tracked by regulators and consumers. But it also provides more opportunity for

a cartel leader to police members' behavior. How much leeway this provides the cartel leader will turn on the particular facts of a case, but canny would-be shrinkflation cartels could use compliance with unit-price laws as cover for their price policing.

As the Supreme Court stated in *Continental Ore Co. v. Union Carbide & Carbon Corp.*, plus-factor analysis is not individualized.⁴⁶ It is a combined inquiry about whether a conspiracy is likely, so the plus factors should be considered together.⁴⁷ Although the fact that plus factors can build upon each other generally helps plaintiffs more than defendants, the wholistic analysis can be properly used by both plaintiffs and defendants. In a shrinkflation cartel, both plaintiffs and defendants should be attentive to how the characteristics of the product at issue can be leveraged to connect plus factors and strengthen their arguments.

Other Litigation Considerations. In addition to the plus-factor considerations above, the nature of shrinkflation will affect two other aspects of litigation. First, litigants should consider that many of the ways shrinkflation affects consumers could be construed as psychological. Experts can only opine on matters within their area of expertise, which is generally economics in antitrust cases, so any statements about states of mind or psychological motivations may be inadmissible.⁴⁸ Litigants will want to either include expert opinions from a broader range of experts or craft the language of their opinions to include only economic effects on consumers. And the opposing party should look to exclude any statements outside these bounds.

Second, plaintiffs will need to be careful with injunctive-relief requests. On one hand, courts generally frown on injunctive relief requests to obey the law.⁴⁹ On the other hand, as the *Pre-Filled Propane* court acknowledged, an injunction to maintain product sizes is meaningless without a corresponding price requirement.⁵⁰ And an injunction that sets both would destroy a company's ability to respond to changes in its environment such as input-cost changes, essentially turning them into regulated entities. So plaintiffs will need to tailor their requested relief to the mechanics of the cartel's behavior to provide the court with a proposal that will provide relief while not overly restricting the cartel members.

Shrinkflation and Consumer Protection.

Outside of its potential uses for a cartel looking to remain undetected, shrinkflation has general appeal for companies looking to increase per-unit prices. Generally, companies increase prices in response to rising input costs. But even if the shrinkflation is well-motivated, consumers should not have price information hidden from them.

Even though consumers can already sue shrinkflating companies for violating state consumer-protection laws and for unjust enrichment, some legislatures have tried to pass laws and regulations aimed directly at shrinkflation.⁵¹ Nonetheless, legislatures in the United States and globally continue searching for direct solutions to shrinkflation.

In the United States, the main legislative response to shrinkflation has been laws and regulations that require unit price disclosures. Eighteen states and the District of Columbia have some form of unit-pricing law or regulation.⁵² Mandatory unit-pricing laws generally require prices to be expressed in price per weight, dry measure or volume, liquid volume, count, area, or length.⁵³ The unit price must be shown on the product's shelf, packaging, or signage, and it must be "displayed clearly and in a non-deceptive manner."⁵⁴ These requirements help consumers understand how much of a product they are buying and, if they were paying attention to the last time they purchased the product, how companies have changed their products.

At the federal level, Senator Rober P. Casey introduced the Shrinkflation Prevention Act of 2024 (the "Shrinkflation Prevention Act").⁵⁵ The Shrinkflation Prevention Act defined shrinkflation as "the practice of downsizing, or reducing the amount or size of a consumer product (as defined in section 101 of the Magnuson-Moss Warranty—Federal Trade Commission Improvement Act (15 U.S.C. 2301)) while not decreasing the price of such product by a commensurate amount."⁵⁶ The act required the FTC to "promulgate regulations . . . to prohibit any manufacturer from engaging in shrinkflation."⁵⁷ It also allowed the FTC to modify its definition of shrinkflation "as the Commission considers appropriate."⁵⁸ The bill has not passed, but it would make shrinkflation an unfair practice under the FTC Act and empower the FTC and state attorneys general to sue manufacturers for shrinkflating.

But unit-price laws and the Shrinkflation Prevention Act have substantial weaknesses. Unit-price laws only minimally increase consumer responses to per-unit price increases.⁵⁹ The Shrinkflation Prevention Act has the advantage of covering the broadest swath of products; consumers are protected from shrinkflation in all goods purchases. But the act has not yet passed. And, even if the act does pass, since manufacturers are prevented from reducing package sizes without a corresponding price change, they do not have the option of a package-size decrease in response to increased costs. There are also circumstances when consumers might prefer a package-size decrease to a price increase. For example, a large can of AriZona Iced Tea has been 99 cents since the early 1990s; since that is a feature of the brand, both the company and consumers might prefer it remain 99 cents even if the company's costs increase.

Other countries have recently explored different solutions to shrinkflation. In 2024, France began requiring supermarkets to display a statement on changes in quantity and price of a product for two months after the change.⁶⁰ Romania,⁶¹ Hungary,⁶² and Austria⁶³ have passed similar laws. The Hungarian law also requires the creation of a database where the shrinkflated products must list the old size, the new size, and the date of the change.⁶⁴ And, as noted above, and also in 2024, South Korea began requiring companies to display any reduction in package volume or weight on packaging

and on their website for three months.⁶⁵ The French and South Korean laws allow manufacturers to change product sizes with notification, but limit the circumstances in which notification is required.

A combination of the French, South Korean, and United States laws is likely to help consumers the most. An ideal law would allow companies to reduce package sizes without a price decrease but require the manufacturer to print the downsizing information on the package and require the retailer to print the downsizing information on the shelving or other signage. And the information should not just include the unit pricing. It should include the old and new unit prices, prominently displayed, so consumers can understand what has changed. The issue of the time period for which the information should be displayed is thornier. Ideally, the period would vary based on the product; a two-month period might be sufficient for consumers of an item that is bought regularly enough for consumers to understand the unit-price change, but it might be insufficient for an item like spices that is bought more rarely. Since the marginal cost to the companies for printing the updated packaging should be minimal, it is better to err on the side of caution and pick a longer period, as a law with variable periods would be more administratively difficult. ■

¹ Eliana Zeballos & Wilson Sinclair, U.S. Consumers Spent 9.7 Percent of Their Disposable Personal Income on Food in 2025, U.S. DEP'T OF AGRICULTURE (June 1, 2026), <https://www.ers.usda.gov/data-products/chart-gallery/chart-detail?chartId=76967>.

² Christian Rojas, Edward Jaenicke & Elina T. Page, How Package Size Changes Affect Food Inflation: Evidence from Scanner Data (June 24, 2025), https://papers.ssrn.com/sol3/papers.cfm?abstract_id=4804636.

³ Aljoscha Janssen & Johannes Kasinger, Shrinkflation and Consumer Demand, 45(1) *MARKETING SCI.* 142, 143 (2026) ("Consumers are considerably more sensitive to the price of a product than to the product's size: a 1% price increase reduces sales by about 1.19%, whereas a 1% size decrease reduces sales by just 0.56%. Although these elasticity estimates should be interpreted cautiously because of potential aggregation bias, the consistent and substantial disparity between price and size elasticities across various alternative demand models and specifications provides clear insights into consumer reactions to shrinkflation.").

⁴ Businesses are less likely to notice "skimpflation." Skimpflation is similar to shrinkflation, but it involves reducing the quality of a good or service while maintaining the price. See Alexis Benveniste, 'Skimpflation': An Even Sneakier Form of Shrinkflation, *BBC* (Oct. 3, 2023); Greg Rosalsky, Meet Skimpflation: A Reason Inflation Is Worse than the Government Says It Is, *PLANET MONEY NEWSLETTER* (Oct. 26, 2021). Examples of skimflation include degrading ingredients in a food product or adding advertisements to a previously advertisement-free streaming service. These changes are even harder to track because this information is not generally posted or tracked. The Bureau of Labor Statistics tracks quality changes in some items such as clothing, appliances, and electronics, but not in food. BUREAU OF LABOR STATISTICS, *CONSUMER PRICE INDEX: CALCULATION*, <https://www.bls.gov/opub/hom/cpi/calculation.htm> (last modified January 30, 2025). The variety of ways that skimflation can be implemented, from ingredient changes to reduced services, complicates the cartel analysis and is beyond the scope of this article.

⁵ Youngeun Lee, Shrinkflation: Evidence on Product Downsizing and Consumer Response 4, 30 (Sept. 25, 2024), https://papers.ssrn.com/sol3/papers.cfm?abstract_id=5053745.

- ⁶ Id. at 37.
- ⁷ Id. at 22.
- ⁸ Id. at 23.
- ⁹ Ioannis Evangelidis, *Frontiers: Shrinkflation Aversion: When and Why Product Size Decreases Are Seen as More Unfair than Equivalent Price Increases*, 43(2) *MARKETING SCI.* 280 (2024).
- ¹⁰ Lemiyana Leman & Rina Maradona, *When Prices Stay the Same, but Contents Shrink: Shrinkflation and Consumer Behavior*, 13(1) *JURNAL AKUNTANSI, EKONOMI DAN MANAJEMEN BISNIS* 47, 50–51 (2025).
- ¹¹ Rojas, *supra* note 2, at 4.
- ¹² Lee, *supra* note 5, at 34–35.
- ¹³ Glenn Ellison & Sara Fisher Ellison, *Search, Obfuscation, and Price Elasticities on the Internet* 24 (NBER Working Paper 10570 June 2004), <https://doi.org/10.3386/w10570>.
- ¹⁴ Id. at 27–31.
- ¹⁵ Koichi Yonezawa & Timothy J. Richards, *Competitive Package Size Decisions*, 92(4) *J. OF RETAILING* 445, 462–63 (2016).
- ¹⁶ Id. at 458–59.
- ¹⁷ Christian Rojas, Edward Jaenicke & Elina T. Page, *Shrinkflation? Quantifying the Impact of Changes in Package Size on Food Inflation*, 11 (April 11, 2024), https://www.researchgate.net/publication/380089008_Shrinkflation_Quantifying_the_Impact_of_Changes_in_Package_Size_on_Food_Inflation.
- ¹⁸ See, e.g., *Catalano, Inc. v. Target Sales, Inc.*, 446 U.S. 643, 650 (1980) (An agreement to extend credit is essentially a price reduction, so an agreement not to extend credit is an agreement to increase prices.); *U.S. v. Socony-Vacuum Oil Co.*, 310 U.S. 150, 223 (1940) (An agreement to buy gasoline at spot price is illegal even if the participants do not control the spot price.).
- ¹⁹ Second Am. Consolidated Class Action Compl. of the Indirect Purchaser End Payer Plaintiffs at ¶160, *In re Packaged Seafood Prods. Antitrust Litig.*, 2017 WL 1854426 (S.D. Cal. May 8, 2017) (“Defendants (1) coordinated a reduction in tuna can sizes”). But the court did not opine on the effects of can resizing, because the can-resizing period was excluded from the expert reports. *In re Packaged Seafood Prods. Antitrust Litig.*, 332 F.R.D. 308, 322 (2019) (“Dr. Mangum does not include the ‘can resize’ period in the benchmarks because he claims the evidence shows that an industry-wide tuna can resizing produced a shock to the market, which makes that period not conducive to use as a benchmark.”).
- ²⁰ 860 F.3d 1059 (8th Cir. 2017).
- ²¹ Id. at 1062.
- ²² Id. at 1069.
- ²³ Ferrellgas Partners, L.P., FTC Docket No. 9360, Statement of Chairwoman Edith Ramirez and Commissioner Julie Brill at 2 (Oct. 31, 2014), https://www.ftc.gov/system/files/documents/public_statements/596841/141031bluerhinoramirezstatement.pdf (“Reducing the volume of propane gas in a tank while keeping the price constant is equivalent to a per unit price increase.”); Ferrellgas Partners, L.P., FTC Docket No. 9360, Dissenting Statement of Commissioner Maureen K. Ohlhausen at 1 (Oct. 31, 2014), https://www.ftc.gov/system/files/documents/public_statements/596381/141031amerigasbluerhino.pdf (“Chairwoman Ramirez and Commissioner Brill are certainly correct that ‘[r]educing the volume of propane gas in a tank while keeping the price constant is equivalent to a per unit price increase.’”).
- ²⁴ *In re: McCormick & Co., Inc.*, 217 F. Supp. 3d 124, 130 (D.D.C. 2016), amended on reconsideration sub nom. *In re McCormick & Co., Inc., Pepper Prods. Mktg. & Sales Prac. Litig.*, 275 F. Supp. 3d 218 (D.D.C. 2017) (“McCormick Pepper”).
- ²⁵ Id. at 133 (“Plaintiffs do not allege any specific communications from which an agreement can be inferred. Second, they allege no facts to suggest that defendants would have been acting against their independent economic self-interest if they had chosen the same prices as charged before without having an agreement about them.... Finally, plaintiffs fail to allege any motivations for McCormick and the retailers to make an agreement about retail prices. Without an agreement, the retailers could each choose to maintain their traditional prices, because plaintiffs have not alleged any reason that retailers would have had to fear being undercut by competitors.”).
- ²⁶ Id. at 139.
- ²⁷ *Interstate Cir., Inc. v. United States*, 306 U.S. 208, 221 (1939) (“As is usual in cases of alleged unlawful agreements to restrain commerce, the government is without the aid of direct testimony that the distributors entered into any agreement with each other to impose the restrictions upon subsequent-run exhibitors. In order to establish agreement it is compelled to rely on inferences drawn from the course of conduct of the alleged conspirators.”).
- ²⁸ 306 U.S. 208 (1939).
- ²⁹ One excellent list, and typification, of plus factors is *The Probative Synergy of Plus Factors in Price-Fixing Litigation*. Christopher R. Leslie, *The Probative Synergy of Plus Factors in Price-Fixing Litigation*, 115 *Nw. U. L. REV.* 1581 (2021).
- ³⁰ See, e.g., *Standard Iron Works v. ArcelorMittal*, 639 F. Supp. 2d 877, 896–97 (N.D. Ill. 2009); *In re Coordinated Pretrial Proc. in Petroleum Prods. Antitrust Litig.*, 906 F.2d 432, 443 (9th Cir. 1990).
- ³¹ *In re Generic Pharms. Pricing Antitrust Litig.*, 338 F. Supp. 3d 404, 449 (E.D. Pa. 2018) (“In a concentrated, oligopolistic market, allegations of motive and actions against self-interest ‘may simply restate the (legally insufficient fact) that market behavior is interdependent and characterized by conscious parallelism.’”) (citation omitted).
- ³² *In re Chocolate Confectionary Antitrust Litig.*, 801 F.3d 383, 397–98 (3d Cir. 2015) (“Even though this practice of parallel pricing, known as ‘conscious parallelism,’ produces anticompetitive outcomes, it is lawful under the Sherman Act for two reasons. First, conscious parallelism is not an agreement Second, conscious parallelism is lawful not because it ‘is desirable (it is not),’ but because courts have no effective remedy for the problem.”) (citations omitted).
- ³³ *In re Generic Pharms. Pricing Antitrust Litig.*, 338 F. Supp. 3d at 449.
- ³⁴ Lee, *supra* note 5 at 22.
- ³⁵ *McCormick Pepper*, 217 F. Supp. 3d at 133.
- ³⁶ This type of short- and long-term interest argument also plays out in traditional plus-factor analysis. See *Alvord-Polk, Inc. v. F. Schumacher & Co.*, 37 F.3d 996, 1014 (3d Cir. 1994) (“That FSC may have foregone some short-term opportunity for sales to 800-number dealers does not suffice to show it acted contrary to its self-interests when its actions clearly would benefit it economically in the long term.”); *Package Shop, Inc. v. Anheuser-Busch, Inc.*, 675 F. Supp. 894, 902 (D.N.J. 1987) (“[D]efendants assert ... that each distributor understood that its long-term relationship with either A–B/St. Louis or Miller could be jeopardized by engaging in out-of-territory sales in contravention of the brewer’s corporate policy; and that each distributor made a separate and independent business judgment that the short-term profits, if any, to be derived from out-of-territory sales were not worth the risk of losing its franchise to sell Miller or A–B beer.”).
- ³⁷ Christopher R. Leslie, *Trust, Distrust, and Antitrust*, 82 *TEX. L. REV.* 515, 618–20 (2004). See also HERBERT HOVENKAMP, *FEDERAL ANTITRUST POLICY: THE LAW OF COMPETITION AND ITS PRACTICE* 187 (7th ed. 2024) (“Among the most successful and credible punishments for cheating is for the non-cheating cartel members to lower their price to the competitive level.”).
- ³⁸ Yonezawa, *supra* note 15, at 462–63.
- ³⁹ Leslie, *supra* note 29, at 1591.
- ⁴⁰ *McCormick Pepper*, 217 F. Supp. 3d at 133 (“Retailers could well have expected that most consumers would be insensitive to the precise amount of pepper in a container and therefore willing to pay the same retail prices as before.”).
- ⁴¹ *Miami Prods. & Chem. Co. v. Olin Corp.*, 449 F. Supp. 3d 136, 151 (W.D.N.Y. 2020); *Kleen Prods. LLC v. Int’l Paper*, 276 F. Supp. 3d 811, 837 (N.D. Ill. 2017), *aff’d sub nom. Kleen Prods. LLC v. Georgia-Pac. LLC*, 910 F.3d 927 (7th Cir. 2018); *In re Titanium Dioxide Antitrust Litig.*, 959 F. Supp. 2d 799, 825–26 (D. Md. 2013).
- ⁴² John T. McGuire et al., *Uniform Laws and Regulations in the Areas of Legal Metrology and Fuel Quality*, NIST HB 130-2026, *NAT’L INST. OF STANDARDS AND TECH.*, 12–13.

⁴³ Id. at 156.

⁴⁴ Song Jung-a, South Korea Cracks Down on ‘Shrinkflation’, *FIN. TIMES*, May 3, 2024, <https://www.ft.com/content/61c3975d-ca0e-4043-bc47-79120bb19347?syn-25a6b1a6=1>.

⁴⁵ Ariel Ezrachi & Maurice E. Stucke, Artificial Intelligence & Collusion: When Computers Inhibit Competition, 2017 *U. ILL. L. REV.* 1775, 1792.

⁴⁶ 370 U.S. 690, 699 (1962) (“In cases such as this, plaintiffs should be given the full benefit of their proof without tightly compartmentalizing the various factual components and wiping the slate clean after scrutiny of each.”).

⁴⁷ Id.

⁴⁸ *Ploss v. Kraft Foods Grp., Inc.*, 637 F. Supp. 3d 561, 575 (N.D. Ill. 2022).

⁴⁹ See, e.g., *Midwest Mach. v. Nw. Airlines, Inc.*, 211 F.R.D. 562, 571 (D. Minn. 2001); *N. Brevard Cnty. Hosp. Dist. v. C.R. Bard, Inc.*, 710 F. Supp. 3d 1090, 1115 (D. Utah 2023).

⁵⁰ *In re Pre-Filled Propane Tank Antitrust Litig.*, 893 F.3d 1047, 1057–58 (8th Cir. 2018) (“The indirect purchasers’ inadequate pleading of an injury-in-fact also means they lack standing to pursue the third injunction ground (not addressed in the FTC orders)—to increase the fill levels of the tanks to 17 pounds of propane. Even if they had adequately pled an injury-in-fact, as the district court noted, the parties ‘agree that mandating an increase in the amount of propane in the tanks without a mandate regarding price would not decrease the price per pound of propane tanks.’”) (citation omitted). The *McCormick Pepper* court also acknowledged this, albeit not in the context of an injunction: “Antitrust law maximizes consumer welfare by encouraging competition, not by dictating companies’ products and prices.” *McCormick Pepper* at 225.

⁵¹ For example, in addition to their antitrust claims, the *McCormick Pepper* plaintiffs also alleged that the defendants violated the consumer-protection laws of 25 states and were unjustly enriched. *McCormick Pepper*, 217 F. Supp. 3d at 129.

⁵² McGuire, *supra* note 42, at 12–13.

⁵³ Id. at 155.

⁵⁴ Id. at 156.

⁵⁵ Shrinkflation Prevention Act of 2024, S.3819, 118th Cong. (2024).

⁵⁶ Id. at § 3(a)(1).

⁵⁷ Id. at § 3(b).

⁵⁸ Id. at § 3(a)(2).

⁵⁹ Lee, *supra* note 5, at 34–35.

⁶⁰ Décret 0104 du 16 avril 2024 relatif à l’information des consommateurs sur le prix des produits dont la quantité a diminué [Order 0104 of April 16, 2024, relating to consumer information on the price of products whose quantity has decreased], *JOURNAL OFFICIEL DE LA RÉPUBLIQUE FRANÇAISE* [J.O.] [OFFICIAL GAZETTE OF FRANCE], May 4, 2024, p. 8–9. See also SERVICE PUBLIC, Shrinkflation: Obligation to Inform Consumers About the Products Concerned by 1 July! (May 7, 2024), <https://www.service-public.gouv.fr/particuliers/actualites/A17378?lang=en/>.

⁶¹ See Ana-Maria Baciú & Cristina Stoica, ‘Shrinkflation’: New Obligations for Economic Operators for Correct, Full, and Precise Consumer Information, *LEXOLOGY*, September 2024, <https://www.lexology.com/library/detail.aspx?g=88c33328-48b7-464d-94e7-d73bbbede162>.

⁶² See Hungary Takes Aim at ‘Shrinkflation’ with Mandatory Price Warnings, *REUTERS*, Jan. 8, 2024, <https://www.reuters.com/markets/europe/hungary-takes-aim-shrinkflation-with-mandatory-price-warnings-2024-01-08/>.

⁶³ ANTI-MOGELPACKUNGS-GESETZ [ANTI-DECEPTIVE PACKAGING ACT] *BUNDES-GESETZBLATT I* [BGBL] No. 9/2026 (Austria). See also Karasek Wietrzyk Rechtsanwälte GmbH, Anti-Deceptive Packaging Law Passed (Feb. 3, 2026), <https://www.kwr.at/en/news/anti-mogelpackungsgesetz-beschlossen>.

⁶⁴ Nemzeti Kereskedelmi és Fogyasztóvédelmi Hatóság, Kiszerelelőcsökkentés, <https://nkfh.gov.hu/kiszereles-csokkentek> (database of packaging reductions maintained by the Hungarian government’s National Authority for Trade and Consumer Protection).

⁶⁵ Hyonhee Shin, South Korea to Slap Fines on Food Suppliers for ‘Shrinkflation’, *REUTERS*, May 2024, <https://www.reuters.com/business/retail-consumer/south-korea-slap-fines-food-suppliers-shrinkflation-2024-05-03/>. The South Korean government recently expanded its rules against shrinkflation to include hygiene products like sanitary pads, wet wipes, and masks. Kim Nam-myung, Korea Mandates 3-Month Disclosure for Hygiene Product Shrinkflation, *SEOUL ECON. DAILY*, Apr. 16, 2026, <https://en.sedaily.com/finance/2026/04/15/korea-mandates-3-month-disclosure-for-hygiene-product>.