Retail’s promotional “prisoner’s dilemma”
Can’t win ... can’t stop
Take a look at this year’s Black Friday promotions and you will notice a troublesome trend. Retailers offered everything from Kindles to vacuum cleaners to bed linens at even deeper discounts than they did just one year ago.

Even more troublesome is the fact that Black Friday is not an exception. It is just a better-marketed and publicized version of what happens every day in retail: the investment of massive sums of money – in the form of deeper discounts and promotions – to attract and keep consumers.

Simon-Kucher & Partners, the world’s leading pricing consulting firm, examined the promotional activities and financial performance of several major U.S. retailers in order to shed more light on these activities and their impact, which represent the worst-kept secrets in the retail sector. We have concluded that retailers are locked in an intricate, high-stakes prisoner’s dilemma. Heavy discounting and promotions are hit-or-miss, profit-draining activities that, paradoxically, no retailer can afford to stop.

In its simplest form, a prisoner’s dilemma puts two accused people in separate jail cells. If both stay silent and do not betray each other, they both go free. If only one betrays the other, the betrayer goes free and the other gets a much longer sentence. If both betray each other, both stay in jail, but with milder sentences.

In retail, the “betrayal” is the attempt to outdo competitors with steeper discounts and more aggressive promotions. The intricacy comes in when you have dozens of “prisoners” in the game rather than just two in the simplified classic version above.

On the surface, neither option in the retailers’ prisoner’s dilemma looks attractive. If the current levels of discounting and promotion continue to escalate, they will claim victims. Imagine a world where every day is Black Friday and where even Walmart can’t get significant market share. That world exists. It’s called Germany, where discounts and deals have spiraled out of control for years, leading to the rise of the Aldi retail empire and its host of deep-discount competitors. This future awaits U.S. retailers if across-the-board, “price is king” strategies prevail.

The other option – a broad-based abandonment of discounting and promotions – would also claim victims. No retailer wants to break ranks and heroically free themselves from the discounting spiral, especially after watching the consequences suffered by J.C. Penney over the last 12 months. The chain has seen sharp declines in same-store sales after it decided to eliminate regular promotions in favor of everyday pricing.

“Heavy discounting and promotions are hit-or-miss, profit-draining activities that, paradoxically, no retailer can afford to stop.”
The retailers’ objective should be to soften their sentences, so to speak, in the midst of a prisoner’s dilemma they cannot escape. The answer is to keep on discounting and promoting, but to do it in a way that minimizes the financial damage. Right now, all this discounting and promotion activity is claiming one very important victim: profit.

Few retailers seem to realize that they are exacerbating the prison sentence they have willingly accepted – in the form of lower profits or even losses. Quarterly gross margins for several of the nation’s largest retailers have fallen by between 0.32 and 0.75 points on average since 2010. That may not sound like much until you consider that one quarterly point of margin represents roughly $100 million for Sears, $175 million for Target, and over $1 billion for Walmart.

How do retailers reduce their sentences? Retailers should start by recognizing the prisoner’s dilemma and its implications, by discarding some long-held and dangerous assumptions about pricing and promotions, and by getting more rigorous answers about how their consumers shop and why.

“Right now, all this discounting and promotion activity is claiming one very important victim: profit.”
Recognizing the dilemma means taking a hard look at the evidence that emerges from our analysis of retailers’ rampant discounting and promotion:

**Exhibit A:** Retailers overpay for the sale

**Exhibit B:** Retailers overstate the lift promotions give them

**Exhibit C:** Retailers risk getting too creative with their promotions

**Exhibit D:** Retailers try to meet too many conflicting objectives at once

The compound effect of all of these factors for any retailer – overpaying for a sale, overestimating the lift, getting overly creative, and chasing too many objectives at once – puts too much profit at risk for retailers to claim they can continue with the status quo. But at the same time, moving away from habitual discounting and promotions is impossible.

Heavy discounting and lower prices do not always have to lead to declining profit. Retailers need to become much more selective in terms of which products they promote, at what time, for how long, how deeply, and above all, what type of promotion will deliver the best return.

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<tr>
<th>Retailer</th>
<th>Black Friday's impact on gross margins</th>
<th>... and what that means in $$ millions</th>
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<tbody>
<tr>
<td>JC Penney</td>
<td>- 10.3 pp</td>
<td>-$557M</td>
</tr>
<tr>
<td>Target</td>
<td>- 3.7 pp</td>
<td>-$783M</td>
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<tr>
<td>Sears</td>
<td>- 2.1 pp</td>
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<td>SuperValu</td>
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<td>Best Buy</td>
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<td>Walmart</td>
<td>- 0.4 pp</td>
<td>-$492M</td>
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<td>Kroger</td>
<td>- 0.5 pp</td>
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Note: Impact is the margin difference between the retailers’ 2011 best quarter and their 2011 Black Friday quarter. The dollar impact is the margin difference applied to 2011 Black Friday quarter revenue.

“Heavy discounting and lower prices do not always have to lead to declining profit.”
The rest of this paper provides a deeper look at the evidence our analysis uncovered and its implications for retailers’ strategies. We hope that this detailed examination will help retail executives make more confident and defensible decisions when they choose to invest millions of dollars – if not billions – in discounts and promotions.

**Exhibit A: Retailers overpay for the sale**

Retailers give greater discounts than necessary in an effort to influence consumer behavior. These discounts most often take the form of additional depth (e.g. 30% off instead of 20% off), but retailers often disguise the discount by linking it to other products, future purchases, or applying it in other creative ways.

The decision to offer a greater discount reflects certain assumptions which make retailers liable to overestimate the power of a price change and to oversimplify the role that pricing plays in a consumer’s purchase decision. We’ll begin with the power of price changes.

Almost every retailer has a number for the price elasticity or promotional price elasticity of different products at the category level, or better yet, even at the individual product level. This means they have a decent understanding – at least historically – of how much additional lift they may get if they offer a product at 30% off instead of 20% off. The operative word here, however, is “historically”. What looks at first glance like a price elasticity number can be polluted by a variety of yesterday’s influences – type of promotion, placement, discounts and price ranges, the economic climate, the number of competitors and their power and behavior – that may no longer apply to today’s decision. Taking any such price elasticity number, say -2.5, and using it to make multi-million dollar business decisions in a new situation is dangerous.

Retailers often risk oversimplifying the role that pricing plays in a consumer’s purchase decision. The classic view interprets consumers’ response to prices in an “action-reaction” way. You stimulate demand with a lower price, and consumers respond by buying more.

The problem is that real life is not that simple. Price matters in every buying decision, but it is rarely the sole factor. In many cases, as our firm’s recent study of consumers’ online and in-store shopping behavior in the United States revealed – it is not even close to being the most important one.

Here, the “pollution” in the simple model takes many forms. How the retailer presents the discount matters, i.e. whether it is dollars off, percentage, new low price, or product ties such as BOGO or a discount on a complementary product. But consumer perception of price thresholds and price fairness also
play a role, as do price anchors and relative price differences, and even the channel the consumer chooses to buy in.

These assumptions about the power of price changes and the role of pricing lead to unnecessarily high discounts because retailers apply what looks like a pure number (a historical price elasticity) in a polluted environment that mutes the actual effect the price change has.

Many retailers have begun to use increasingly advanced analytics to model potential lifts with greater precision. The pursuit of such precision matters, as we said in the introduction, because being “slightly off” on a promotional strategy can yield a profit swing of tens or even hundreds of millions of dollars.

These retailers have access to so much detailed information to process, and so many products to take decisions on. The amount of information has grown exponentially, as has the complexity, but the amount of time to take decisions hasn’t changed at all. Retailers simply don’t have enough time to optimize everything. Instead, they take a deep focus on a few critical items or categories and then rely too heavily on anecdotes, history, or in the worst case, emotion for the rest of their decisions.

Finally, the worst cases of excessive discounts are those attached to products which probably should not be on promotion at all. Not every product or product category in the store is a traffic driver. Every retailer will have products, especially luxury, specialty, or niche items that consumers reasonably expect to pay full price for. But these products still find their way into retailers’ circulars, presumably in an effort to support a retailer’s overall perception of being competitively priced.

An inherent danger of excessive promotion is the training effect it has on consumers. Former Supervalu CEO Craig Herkert described this phenomenon very well in an interview with The Wall Street Journal in 2009, when he said that “in too many cases, we’ve trained our customer to only buy certain goods when they’re on promotion, because we’ve allowed the gap between the promotional price and the regular price to become too great.”
Exhibit B: Retailers overstate the lift the promotion gives them

Please think back to the discussion in the previous section about using a historical price elasticity estimate to help calculate the lift for an upcoming promotion. If you use a relatively robust number such as -2.5 or -3.5 for price elasticity, you can model a promotional lift that can look almost irresistible to a decision-maker.

Why are the lifts in such models usually too good to be true? Think of a market structure typical for many stable product categories in mass merchandisers, club, food and grocery, drug, and dollar stores: two or three major national brands, maybe one or two discount brands, some private label, and an overall low to modest growth for the category as a whole. If a retailer really does get a lift of 20% or 30% from a promotion, it is mathematically impossible to attribute that lift to incremental demand. Such promotions do not stimulate demand. They steal it.

And where do they steal it from? If the retailer’s goal was to steal it from competitors, their enthusiasm might diminish when they realize they stole a lot of it from themselves, either by encouraging consumers to trade down within the store, or by pulling forward future demand.

This chart shows what happens when a promotion pulls demand forward. An assumption around price elasticity may have told General Motors what to expect for immediate sales increases when they launched their “Employee Discount Program” in the summer of 2005. Let’s even assume for the sake of argument that their predictive model was correct. What that model didn’t show is where all those cars came from. They came from the future, or more precisely, from autumn 2005.

To do a better job of realistically estimating incremental lift from a promotion, a retailer needs to look more rigorously at shifts in demand within the whole category, not just at the product or brand level. They can also look, assuming they have

![2005 GM Monthly Unit Sales compared to Year-Ago Month](image-url)
reliable data, at shifts in demand across categories. Did the consumers who bought the promoted product buy more or less of something else on that trip? Retailers also need to account for shifts across channels, including shifts to online from in-store buying. Finally, the cost of a promotion also matters when trying to measure the success of a promotion.

Aiming for perfect execution is both hard and expensive. It also stretches beyond logistics, merchandising, and consumer communication. A recent example is the effort to offer “price matching” guarantees around Black Friday and the weeks leading up to it. If an associate on the sales floor has several hundred items in his or her department, how much effort is required to make sure that the associate can verify a consumer’s claim of a lower price elsewhere, and that the associate can properly decide to accept or refuse the request? How much effort is required to make sure the associate can do this efficiently in a way that minimizes the risk of customer frustration?

Trying to improve, perfect, or even ensure consistent execution may quickly eat into the incremental gains expected from the promotions in the first place.

**Exhibit C: Retailers risk getting too creative with their promotions**

In Exhibit A, we mentioned that the price changes – and price itself – do not always play a large enough role in consumers’ purchase decisions to warrant the high discounts that retailers offer.

The field of behavioral economics has begun to offer useful insights into both the role of price and the role of other factors in a purchase decision. People do not always behave rationally, which helps explain why consumers are notoriously bad at redeeming discounts, rebates, or rewards in the future. Cell phone companies, appliance manufacturers, and consumer electronics makers have capitalized on this well-established and proven tendency for years.

The same thinking underpins a lot of the “shopper marketing” activities at retailers. These creative promotions communicate additional discounts to consumers, but at a lower cost to the retailer because the discount does not come off at the register, and the retailer expects the rate of future redemptions to be low.

In October 2012, CVS put a $12.99 Gillette Fusion Proglide razor on promotion for $9.99, but then offered $5.00 in “extrabucks” rewards and said that ‘It’s like getting it at $4.99.’ CVS also ran a similar promotion in October for Crest toothpaste.

In theory, the premise seems sound. But behavioral economics also tells us that some consumer segments will start weighing their perception of a future reward against their strong preference for instant discounts. This presents
a tough challenge to the retailer, especially when these promotions involve brands that are household names: with potentially hundreds of millions of dollars at stake, how does the retailer calibrate these discounts? And what evidence proves that this form of promotion is more effective in driving sales than a more conventional promotion?

The more that consumers need to think about price, or “do the math” about a price decision at shelf in one of these shopper marketing campaigns, the more sensitive they become to price. It is another example of the training that former Supervalu CEO Herkert mentioned. The more you teach consumers to think about price, the more they will think about price.

In our firm’s recent study of consumers’ online and in-store shopping behavior in the U.S., gift cards did prove to be a strong incentive under certain circumstances. When we asked online buyers what types of incentives would lure them back into the store, between 30% and 40% of consumers in the health & beauty, fashion, and consumer electronics categories cited gift cards, putting them at the top of the list. Gifts cards also ranked near the top in almost every other category we examined. Consumers viewed gifts cards, in fact, as an even stronger incentive than lower prices. We suspect that gift cards work because they serve as a restricted form of currency. The consumer has money to spend, but no longer has a say in where he or she spends it.

Nonetheless, the appeal of gift cards is not universal. How well can the retailer isolate those consumers and target them? And how well does the retailer know what serves as a strong draw for the remaining 60% to 70% of customers?

This applies to all creative forms of discounts and incentives. Do consumers see value in ExtraCare Bucks, gift cards, coupons, discounts off multiple products, or being entered into a sweepstakes? The answer is yes and no. Not every customer will respond to such incentives. Those who do will not all respond to the same degree or with the same frequency. Consumers do not fit

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comfortably into broad classifications, such as the pervasive “cost-conscious consumer” nearly every retailer wants to attract nowadays.

Retailers have to move towards consumer-driven promotions, rather than continuing to create promotion-driven consumers. They must know what really drives consumer behavior for their consumers, and above all, what is overkill when they promote a product.

**Exhibit D: Retailers try to meet too many conflicting objectives at once**

In the introduction we mentioned that the biggest victim of the retailer’s prisoner’s dilemma right now is profit. Increases in discounts and promotions help explain the declines in gross margin at many retailers, but this is a symptom of a deeper-seated, unavoidable conflict at the retailer’s highest management levels: what tradeoffs do they want to make and why.

To begin a discussion around these tradeoffs, we often present executives with four alternatives – an increase in market share, an increase in revenue, an increase in gross margin, and an increase in profit dollars – and ask them which one they would prefer most.

The most common response is “yes”.

But these executives know that in most markets – especially ones with low or modest growth – it is extremely difficult for a company to achieve all four alternatives simultaneously in a sustainable way. In other words, a decline in profit dollars or gross margin can reflect a conscious temporary choice rather than poor performance or poor execution. A retailer has chosen to invest in higher volumes or higher revenues in that quarter or half-year period.

These tradeoff decisions have inherent conflicts. Slowing down a decline in gross margins will likely mean a slight loss of market share, which will trigger a desire to buy the share back at some point. In each of these cycles, price takes another beating, either directly or through the heavier discounts and promotions. This in turn reinforces consumers’ focus on prices, as they become more conditioned to pay attention to deals and prices.

This cycle brings the retailers’ high-stakes prisoner’s dilemma back into focus. If a retailer wants to achieve some stability and consistency in its pursuit of financial objectives, it cannot simply stop discounting and promoting.

The financial results of J.C. Penney show what can happen when a retailer – facing the same prisoner’s dilemma as all other retailers – chooses to eliminate regular promotions in favor of everyday pricing. J.C. Penney announced that move in January 2012. In mid-May the company saw its stock price fall by 19.7% in one day after saying it would miss quarterly revenue expecta-
tions by $250 million. In its latest quarter (August-October 2012), the retailer reported a 26% decline in same-store sales, with gross margins falling by 4.9 percentage points.

If you can’t eliminate them, you have to calibrate them better.

In a prisoner’s dilemma, one “prisoner” will usually try to guess what the other will do. But in the retail sector, a “prisoner” or competitor has to try to divine the intentions of many rivals.

In our firm’s 2012 Global Pricing Study, which includes responses from 2,700 managers and executives worldwide, we learned that 59% of the respondents think their company is currently involved in a downward price spiral. But 88% of the respondents said that a competitor – not them! – started that downward price spiral.

Looking just at the study’s respondents from the retail sector, the same pattern holds true, with 69% of respondents’ feeling they are in a downward price spiral and 89% believing that a competitor started it.

In other words, when discounting and promotional activity intensifies, it’s always the other guy’s fault, not the retailer’s own.

Game Theory suggests that all retailers should continue to “betray” and keep on discounting (the Nash equilibrium). In the real-life dilemma that U.S. retailers face, they have no escape. But the very high-stakes “game” these retailers play day in and day out is also far more nuanced. It requires them to have the best understanding they can about what really drives behavior for their consumers. That will help them understand what would be overkill when they promote a product. Given the money involved, this knowledge represents a significant competitive advantage.

The better and smarter the retailers plan and execute their discounting and promotions, the lighter their sentences will be. It lies in their control.
About the author

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-William Poundstone

*William Poundstone - *Priceless: The Myth of Fair Value (and How to Take Advantage of It)*, January, 2010