A SHORT BRIEF FOR FOUNDERS AND OPERATIONS LEADS

The Drift Gap

Every time you re-check a competitor price sheet, the prices are different. So the sheet gets fixed again, and again, and it never ships.

EIGHT ROWS OF A PRICE STUDY, RE-CHECKED THREE TIMES

Green is the dated snapshot. Amber is drift. Red is drift worth a re-read.

BRAND (INVENTED)	STORE · READ ON	SNAPSHOT	RE-CHECK 1	RE-CHECK 2	RE-CHECK 3
Ridgeline Mix	Store 1 · 4 Mar	6.49	same	same	+4%
Pocket Trail	Store 2 · 4 Mar	3.99	-6%	same	-6%
Summit Crunch	Store 1 · 4 Mar	7.29	same	+3%	+3%
Two Pines	Store 3 · 5 Mar	5.49	+9%	-5%	same
Cairn Bites	Store 2 · 5 Mar	4.79	same	same	same
Fieldday Nuts	Store 4 · 5 Mar	8.99	-31%	-31%	-28%
Low Tide Mix	Store 3 · 6 Mar	5.99	same	+7%	no link
Hearth Oat Mix	Store 1 · 6 Mar	4.29	+5%	same	-4%

Every re-check will find different prices.

Not because the sheet was wrong, but because the shelf moved.

A dated snapshot answers the question. Chasing drift never ends.

This brief is the call I made, the two options I turned down, and what I still watch.

Same product, same chain, two stores: identical price only 78 percent of the time. Cavallo, NBER Working Paper 25138, 2018. The trail-mix example is invented.

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WHAT THE RESEARCH MEASURED, AND WHAT IT DID NOT

One product can carry several prices at once.

This is not a hunch from one messy sheet. Economists who collect prices at scale have measured it: the same item, at the same chain, in the same week, shows different numbers depending on which store and which channel you read.

78%

of store-to-store comparisons at three large US multichannel chains showed an identical price. Across all pairs, the average gap was 5.49 percent.

Cavallo, NBER Working Paper 25138, 2018

~72%

of the time, online and in-store prices were identical, across 56 large multichannel sellers in 10 countries. In the US: 69 percent.

Cavallo, American Economic Review, 2017

91%

of ZIP-code comparisons at Amazon showed an identical price, with an average gap between locations of only 1.61 percent

Cavallo, NBER Working Paper 25138, 2018

WHO MEASURED IT

Alberto Cavallo (Harvard), with the Billion Prices Project

For the 2017 paper, workers scanned prices in physical stores and software read the same product online within seven days. The 2018 figures cover over 10,000 identical goods read in up to 105 ZIP codes during a single week in March 2018, presented at the Jackson Hole symposium.

WHAT IT IS NOT

A figure for your category, or for this year

These are large chains, measured years ago, and food and beverages showed the most variation between locations. Use the numbers to set an expectation that prices will differ, not to forecast how much your own sheet will move.

THE FIGURE I WOULD NOT USE

"Amazon changes its prices 2.5 million times a day"

It comes from a December 2013 press release by a price-monitoring vendor, with no method I could find, and the original page now returns an error. It is quoted everywhere. It is not evidence.

STATED PLAINLY

A price read from the web is a reading taken at one store on one day. If the sheet does not say which store and which day, the research has already told you it will not hold.

THE PROBLEM AS MOST OWNERS SEE IT

Every re-check found a new mistake.

A sheet of a hundred-plus rows was checked, then checked again. Each pass found new "differences", and each pass turned into a round of fixes.

100+

rows in the sheet, each re-opened at least twice

From practice, banded

Every

re-check found prices that no longer matched the sheet

From practice

~30%

of products at large US multichannel chains changed price each month in 2014 to 2017, up from 15 percent in 2008 to 2010

Cavallo, NBER Working Paper 25138, 2018

HOW IT LOOKED

Errors, everywhere, every time

A reviewer opens a link, sees a different number, flags the row, and someone updates it. Multiply that by a hundred rows and three rounds of checking, and the sheet is never finished.

WHAT IT WAS

Drift, not error

The site had assigned the reviewer a different store from their location, or the price had moved since the day it was read. The original reading was right on its day, and the research says that is exactly what to expect.

WHY IT KEPT GOING

Each fix made the next check worse

Every update mixed a new store and a new date into the sheet, so the next reviewer found even more rows that disagreed with whatever their own browser showed.

THE MISSING RULE

Nothing on the sheet separated "this price was wrong when read" from "this price changed since". Without that rule, every check is a fix.

THE OPTIONS I CONSIDERED

Three ways to handle a moving shelf.

Each option is a real choice with a real cost. None of them makes the prices stop moving, so the question is which cost you would rather carry.

OPTION 01

Update every row to the latest read

Looks current, and nobody can say the page disagrees with the sheet. It also mixes stores and dates in one table, so no two rows are comparable, and it never finishes, because the prices never stop moving.

OPTION 02

Freeze a dated snapshot, log drift

Honest and finishable. Every row says where and when it was read; later differences go into a note. The cost: a reader who clicks a link may see a different number and has to read the date to understand why.

OPTION 03

Re-read everything at one store, one day

The cleanest data you could ask for. Often impossible in practice, because many sites assign the store themselves from your location, and a full re-read of a large sheet rarely fits in one day.

OPTION 01 COSTS

Time, forever

Every check starts a new round. With almost 30 percent of products changing price each month at large chains, the sheet is always nearly done.

OPTION 02 COSTS

One calm conversation

"The link shows something else." The answer is the date and store on the row, with the drift note beside it.

OPTION 03 COSTS

Control you do not have

You cannot fix the store when the site picks it for you. And by the time a large sheet is re-read, the first rows have already started to move.

THE TRAP

Option 1 feels like the careful choice. It is the expensive one: it spends the most time and produces the least comparable table.

THE CALL I MADE

Freeze the snapshot. Log the drift.

I chose option 2, with one exception. The study answers "where does the product sit in the range", and a dated snapshot answers that well.

THE CALL	**Freeze the file after one independent audit** After the freeze, a different price at a different or unknown store is drift. It goes in the row's note with the date. The price stays as read.
ON EVERY ROW	**Store, location, date and a clickable link** The store shown on the page at the time of reading, recorded every time, because the location can change silently between reads.
THE EXCEPTION	**Sources with one national price** When a seller charges one price everywhere, a change is not location noise, it is a real move. Those rows are updated to the latest same-day read.
WHY	**Chasing drift adds cost without changing the answer** A few points of movement on a handful of rows does not move a product's position in the range. The averages and the conclusion hold.

> Decide your drift rule before the first re-check, not after. A rule written once the arguments start will be bent to settle them.
>
> From the decision log

THE ANSWER WHEN SOMEONE CLICKS

"That row was read at that store on that date. The note beside it says what it shows now." Said calmly, it ends the conversation.

WHAT TO WATCH AFTERWARD

Freezing is not ignoring.

A frozen file still gets read. Every finding from a later check lands in one of three buckets, and only one of them changes the price.

CORRECT

Could not have been right

Wrong size, a sale typed in as the regular price, a price taken from a related item on the same page. These were errors on the day they were read, so they get fixed.

LOG

Moved since

A different price at a different or unknown store. Write it in the row's note with the date and the store. Leave the price alone.

RE-READ

Moved a lot

Drift above about 25%. Re-read it at a named store, because a gap that size may be a different pack, a clearance price or a different product altogether.

6.7 to 3.65

months: how long a regular price lasted at large US multichannel chains, 2008 to 2010 against 2014 to 2017

Cavallo, NBER Working Paper 25138, 2018

20%

shorter price durations for Walmart products that were easily found on Amazon, 2016 to 2018

Cavallo, NBER Working Paper 25138, 2018

84%

identical across ZIP codes for food and beverages even at Amazon, against 91 percent overall. Groceries drift most.

Cavallo, NBER Working Paper 25138, 2018

LINKS THAT DIE

Mark them, do not delete the row

A dead link does not make the reading false. Mark it "no link", keep the dated price, and note when it went.

WHEN TO RE-RUN

When the decision is today's price

With a regular price lasting three to four months at large chains, a snapshot older than a quarter is history. Setting a launch price this afternoon needs a same-day read at named stores.

THE LINE THAT ENDS IT

Only the first bucket touches the price

The other two touch the notes. That single rule is what lets a re-check end instead of starting another round of fixes.

EVIDENCE, NOT ADJECTIVES

I have frozen a price sheet and defended it.

This is evidence that I can turn a messy research task into a file that finishes. It holds up to a second reviewer and survives the "but the link says" conversation.

BUILT

A shelf-price snapshot in a day

From a handful of seed rows to 100 to 150 checked rows across 30 to 40 brands, in about one working day. Every row carries store, location, date and a clickable link.

ENDED

Re-checks that never closed

Several narrow re-checks each found something new. I replaced them with one independent audit against a fixed checklist (pass, error, drift, no link, unverifiable) and a freeze rule.

CORRECTED

A checker that overwrote a right answer

A text-reading pass called a pouch a box and changed a correct value. I re-ran the check from package photos and sent flags to the owner of the rule, not into the file.

THE HABIT

A date and a store on every number from the web

Regular price in its own column, a true sale only in the discount column, and any average on fewer than 3 rows labelled directional. The drift rule is written before the first re-check.

CREDENTIALS

Google Project Management Professional Certificate and Google AI Essentials

Plus Anthropic AI Fluency and Model Context Protocol. 31 certifications in total, every one independently verifiable.

> He was the most thorough QA Analyst I've had the pleasure of working with. He is an excellent communicator and gets things done on time and efficiently.
>
> Mike Paradiso · Sr. Digital Producer · AbelsonTaylor · Client-side lead on the Foxhole QA work

HOW TO START

Put a date and a store on every number.

You do not need a new tool to stop the re-fixing. You need two columns and a rule, written down before the next check starts.

OPTION 01

Add two columns today

Store as shown on the page, and the date it was read. Fill them for every row you can still trace. The rows you cannot trace are your first finding.

OPTION 02

Write the drift rule first

Correct, log or re-read, with the 25% line and the one-national-price exception. One paragraph, agreed before anyone opens a link.

OPTION 03

Use the free tool and playbook

The Shelf Price Normalizer at me.kabuhayan.app/tool-shelf-price-normalizer, and The Price Check playbook for the full method.

WHAT I WOULD EXPECT YOU TO FIND

A sale price sitting in the regular column, one size read from the wrong text, and a handful of "errors" that were only drift all along.

Available now for remote work

Chief of Staff · Operations · Senior Executive Assistant · Project Manager
Tell me which price on your sheet keeps getting re-fixed.

pacardopaul18@gmail.com
linkedin.com/in/paulpacardo
me.kabuhayan.app

Sources: Cavallo, A. (2018), "More Amazon Effects: Online Competition and Pricing Behaviors", NBER Working Paper 25138, presented at the Jackson Hole Economic Policy Symposium (Federal Reserve Bank of Kansas City). Used for the share of identical prices across locations (78 percent at three large US multichannel retailers, 5.49 percent average gap; 91 percent at Amazon, 1.61 percent gap; 84 percent for Amazon food and beverages), from over 10,000 identical goods read in up to 105 ZIP codes in a single week of March 2018; and for the monthly frequency of price changes at large US multichannel retailers (15 percent in 2008 to 2010, almost 30 percent in 2014 to 2017), implied regular-price duration (6.7 months to about 3.65 months), and 20 percent shorter durations for Walmart goods easily found on Amazon (2016 to 2018). Cavallo, A. (2017), "Are Online and Offline Prices Similar? Evidence from Large Multi-Channel Retailers", American Economic Review 107(1), Billion Prices Project data: 56 retailers in 10 countries, over 24,000 products and 38,000 observations, December 2014 to March 2016; online and offline prices identical about 72 percent of the time (US 69 percent). Both studies cover large chains and are several years old: they set an expectation that prices differ by store and move often, not a forecast for any category today. Deliberately excluded: the claim that Amazon changes prices 2.5 million times a day, from a 2013 vendor press release with no method I could find. Figures are third-party research, not results I am claiming. Practice figures are banded from real work and describe patterns, not a client. The trail-mix brands are invented.