

Bonus Question

Week 2 Additional · Up to 10% extra on this discussion

★ Two Avocados, Two Elasticities?

The reading fit a log-log line to conventional avocados and found an elasticity near -0.6 . The same stores sold organic avocados in the same weeks. Fit the same line to the organic data and the slope comes out *positive*, as if shoppers bought more when the price went up. Is organic demand really that strange, or is one of the three questions doing the work? Use the data to decide.

Your Data

File. `data/bonus_avocado_weekly.csv` in this package. It holds the weekly U.S. average retail price and the number of avocados sold, for conventional and for organic Hass avocados, one row per week and type.

Type	Weeks covered	Price range	Volume range, per week
Conventional	January 2015 to March 2018	\$0.76 to \$1.65	21 to 63 million
Organic	January 2015 to March 2018	\$1.00 to \$2.09	0.5 to 1.8 million

Both series come from retail scanners, so they count what sold at the register. Source: Hass Avocado Board retail scan data, via the public Kaggle and OpenML mirror of the May 2018 file. You may also use a product of your own choice, as long as you have weekly prices and quantities and link the source.

What to Do

- (1) Upload the CSV to Gemini in Colab, the same way as in the guide.
- (2) Ask Gemini to draw price against volume for each type on logarithmic axes and fit the log-log line. The starter turn below works.
- (3) Answer the three questions in 150 words or fewer.

Starter turn

I uploaded `bonus_avocado_weekly.csv`. Before you analyze anything, describe the file. Then, for each type, draw price against volume as one dot per week on logarithmic axes, fit a straight line to the log-arithms, and report the slope as an elasticity. Show the arithmetic for one week. Finally, draw each type's price and volume over time, one panel per type.

Answer these

- 1. The two slopes.** Report both elasticities. Does a positive slope for organic mean organic shoppers buy more when the price rises? Which of the three questions explains it? The over-time chart is the clue.
- 2. Hold the rest still.** Ask Gemini to compare each week with the average of its own year, or to fit the line one year at a time, and report the organic slope again. What changed, and why?
- 3. The planner.** You run produce for a grocery chain and can discount one type for one week. Which one, and what would you look for in the following weeks to know that the discount, and not the calendar, moved the volume?

How to Post

Due: Thursday, October 15, 2026 Optional. Up to 10% extra on this discussion.

Reply to your own share in Discussion Week 2. Start the reply with the word **BONUS**, attach your chart, and add your answer.

One more thing to weigh. These are retail scan data: avocados sold, not avocados wanted. A week with empty bins records fewer sales than there was demand. Say in one sentence whether that changes your answer.

Reference

Conrad, S. A. (1976). Sales data and the estimation of demand. *Operational Research Quarterly*, 27(1), 123–127.