

ADVERTISING EFFECTS ON SALES: WINS AND DRAWS BOTH COUNT

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Recently I had the pleasure of consulting again with that lottery whose advertising agency employs my young friend Jade. It was at that place in the budget cycle where people talk about return on investment from advertising. My role as a specialist in measuring things gets attention at such times. I sat down with Jade to review how we go about trying to make measurements of the impact of advertising on sales.

We recalled how years ago, when we first met, my basic method had sounded sort of negative to Jade (*Insights*, May/June 2014). But she now accepted that my basic approach was “test whether something has changed,” rather than “prove that advertising is adding value.” I develop a picture of what “nothing has changed” would look like, and then compare that to what really happened. We are all glad when the pictures don’t match.

Jade had challenged me to tell about the most clear-cut effect of lottery advertising I had seen recently.

I was explaining a test that had been

done in Washington in a supermarket chain. Someone had come up with a way to make a colorful cover for the little conveyor belt that you put your groceries on. You could put advertising on this cover and install it in a matter of minutes. Some Lottery folks had worked up a design featuring an image of the lottery vending machine that stood within sight of the checkout, on the way out the door.

I was taking care to explain my evaluation method, because the results had shocked me.

“We used a ‘different-stores, same-time’ design,” I said. “All the stores belonged to the same chain, and had the same equipment, in the same part of the state. At some high level, they had the same management. Of course, the people involved day-to-day were different in every store. Some of the stores got the special treatment, and some didn’t.”

“How did you decide who got the new stuff?”

“I didn’t. Someone else did. That could be a problem... you don’t want to give the special treatment to the ones

who are poised to improve on some other basis. I would have just picked at random from the whole set of stores. But as it happened, the eight best-performing stores out of a set of 20 got the advertising.”

“But that was already done,” I continued. “And so in a different-stores, same time analysis, the first question is ‘how predictable are sales in the test set from sales in the other stores - call them the controls. And of course, by sales I mean what the players buy, not what the retailers do.’”

“Not activations,” Jade said, confirming that she understood the importance of the difference.

“Right. And so I went back a year, week by week, and found that consumption in the test stores followed the same pattern as in the control stores. As in this chart, here. And of course, there’s a number that describes how tight the correspondence.”

“The correlation coefficient?”

“Yeah, it was high, over point-nine. So, I can make a prediction of what sales are going to be in the test stores if I

know what sales are that week in the control stores, and it's a pretty good prediction. That is, it's never exactly right, but it's high about as often as it's low, and it's usually close."

"And so you, the skeptic, use that same predictor going forward with the assumption that nothing will change."

"And in this case I am proven wrong in a big way." And I showed her the chart below, documenting a big lift in consumption after the advertising was installed, while little changed in the control stores.

"Is that a big change?"

"Big as anything I've seen – about 25 percent!"

"Are they going to install these things everywhere?"

about that? But because it's only once in a few stores, we don't know if it's repeatable. Replication is important, because it helps to control for all those details of this test that may have been important to the result, but that I did not recognize. Like the selection of the test stores, for instance. We'll do it randomly next time. Maybe it was important, maybe not, but if this way of advertising is worth investing in, I should be able to do several small-scale trials and see consistent results."

"And if the results are not consistent?"

"I may never know why. Or, I might be able to look closer and find something. Sometimes having inconsistent results is a key to

needed to go.

"But then, suppose I get a consistent lift in several small-scale trials. The next question is, 'is it incremental?' That is, I might buy here, now, what I was going to buy tomorrow, somewhere else. And that might be good for the store, but it's neutral for the Lottery. And a bigger test might give the same result. But what I really want to know is: over the whole region, will I sell more this week if I have these things in place? I am seeing evidence that we can change when and where people buy, but does that change how much they buy?"

"If that's the important question, why do you bother with these little tests?"

"Because I know how to do them well, I suppose. I want to do good work, like everyone. I have a powerful method for small tests, where I can find a good control group. But the bigger my test group gets, the bigger the control group I need, and the more expensive the test gets. And I am still nowhere near affecting the whole region. By the time I am doing tests big enough to expect measurable incremental sales over the whole region, I am pretty much just going to market with it. So, if you're looking for positive proof of incremental sales, you're not going to find it without making a big commitment."

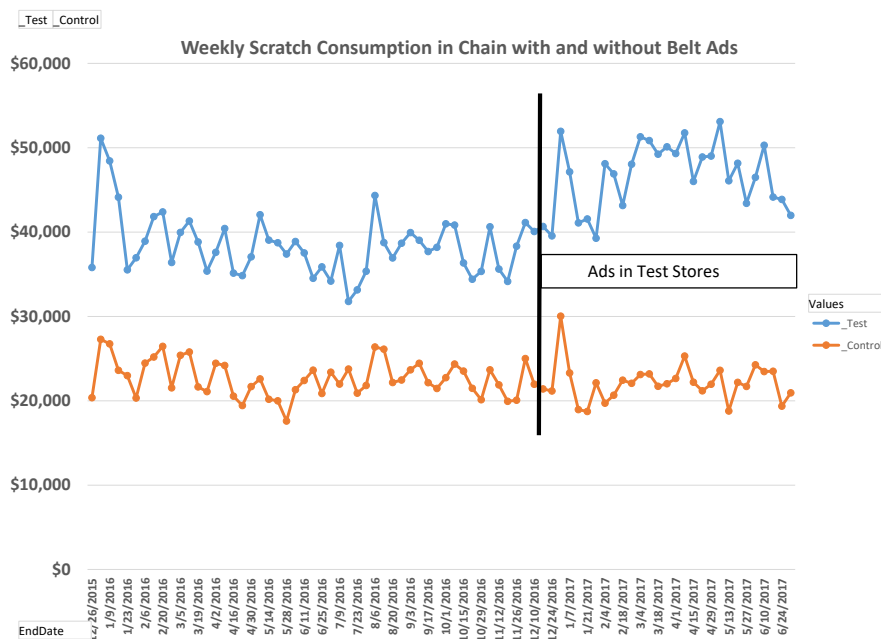
"It sounds like you are saying that you are good at measuring improvements that may not matter."

I hope I have mentioned that I value Jade's bluntness.

"There is some truth in that. But consider: what if I make a good, tight test and see no effect at all? I think I can identify things that don't work, or don't do much. So maybe I can't promise that the positive effects will scale up, but at least I can identify, early on, the things that don't bring a return worth pursuing."

"Now, it sounds like you are good at identifying things that don't work."

"OK, that's hard to market, maybe, but it's a valuable service. Everybody likes it when they try something and it looks like a big win. The nice thing about the research and testing gig is, you win either way: maybe you identify something that works and ought to be tried again,



"Well, they're going to do a bigger test. And I'm trying to manage expectations."

"You don't think it will repeat?"

"It might, and that would be cool, but it's sort of like this: this was a small, pretty tight test that gave a clear result, and what's not to like

getting a better understanding of what is happening. Inconsistency is opportunity, if you have patience enough to pursue it."

Jade fidgeted with her rings a little, and I realized that while I would gladly have nattered on telling stories from past jobs, that was not where we

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and maybe you identify something that is better left alone. There is nothing wrong with confirming that resources are being used well, and there is nothing wrong with keeping resources from being wasted. As long as there is something to test and you test it fairly, you are adding value.”

“But I’ll bet you don’t gloat over the ones that get abandoned.”

“No, of course not. And I’ll tell you, I am as glad as anyone to see a big positive lift now and then. Helps to maintain my credibility. It is too easy for people to think that I am just a spoilsport skeptic, if nothing seems to work.”

“So now where do you come in, on the big question about grand-scale advertising? It seems to be just the opposite end of the pool from where you are most comfortable. Millions of dollars being spent on a statewide scale – we think it works or we wouldn’t do it. But what can you add to that discussion?”

“What I always try to add is some analytical rigor. And that is hard enough to bring to the discussion, even when it seems pretty clear-cut to me. When you’re talking about statewide campaigns, it becomes very hard to find a control group. Where are the people who can buy the product, but don’t get the advertising? It does happen sometimes. Back when media buys were all broadcast, you might see a state lottery neglect to advertise in a border town because it was served by broadcasters in a bigger city across the state line...”

“Yeah, when mismatch between the real market area and the Designated Market Area makes the ads too expensive.”

“In those cases, maybe you’ve got a different-stores, same-time comparison. And you would need to follow the same method we talked about earlier – show predictability in the absence of ads, that degenerates in the presence of ads.”

“So you still need a baseline period without ads? Good luck with that!”

“You’re right. In the case of a big, expensive effort that is thought to have a major impact, it becomes very hard to change anything. It’s like agricultural research.”

Jade gave me a blank look. “What does lottery advertising have to do with farms?”

“I mean, consider back in the day when a farmer had to live from one year to the next on what he could grow. Maybe he grew up

doing things a certain way – what business does he have trying something different? No one is going to fault him for keeping with tradition, but if he tries something different and fails, his family is going to be hungry. There wasn’t any agricultural research until someone cared, who would not suffer if he tried something different and failed.”

“So you mean, no lottery director is going to voluntarily do something radically different with advertising? Like cut back the budget severely, even for a while?”

“Especially not when there may be negative consequences that come slowly. Who wants that responsibility?”

“That could be a very expensive experiment, in the long run.”

“On the other hand, your state legislatures may put a lot more value on cash they can grab this year, than on cash some future legislature might miss in some future year. They are reckless enough to drive some interesting experiments.”

“But that’s state-by-state, and the whole state.”

“Right. So, your comparison is strongest in the multistate games that have the same value proposition everywhere. Even though it changes from day to day, on any day the jackpot’s the same everywhere. But the advertising content and effort will differ. So you have a many-fold different-stores, same-time comparison.”

“Sounds complicated. Can’t you just do a before-and-after, within a state that gets its advertising cut involuntarily?”

“I can do that, but the question might become ‘before and after what?’ I’ve seen sales in those games change radically just due to things that happen within the games themselves.”

“The billion-dollar jackpot...”

“And things have been different ever since. But that’s OK, it’s not much trouble to build a model for a base period and run it into the future. Then you’d have a same-stores, different-time comparison. It seems to me that those are generally weaker.”

“But you’ll probably build them anyway, because you seem to get into that sort of thing.”

“Well, yes, I may as well confess to that. Maybe we’ll see what trouble comes out of the legislative sessions, and then try to learn something from it.” ■