



# Balancing TV & Facebook Campaigns

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## How to compare Facebook with TV advertising?

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Facebook and TV are two similar customer acquisition channels, despite one being “online” and the other being “offline”. We label them similar because both platforms allow advertisers to specifically target certain demographics and interests, either by selecting audiences (Facebook) or combining networks, rotations, and programs (TV). When TV and Facebook are less targeted, they tend to compel people to buy products or services that they may not have identified or considered as a need. In essence, they are both demand-generating, as opposed to Search Engine Marketing, which is demand-harvesting.

Marketers should compare the performance of Facebook to that of TV, but this comparison can only be accurately performed if both channels are adjusted for **incrementality** and **marginal costs**.



## Incrementality

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The concept of incrementality is tightly linked to prospecting and retargeting campaigns, which are mostly unique to Facebook. Prospecting campaigns aim to reach people who have not previously visited the company's website or purchased its product. Retargeting campaigns, on the other hand, target only past visitors (and possibly customers) to the company's website.

While it is true that retargeting increases the likelihood of customers making a first-time purchase (or repeat purchase), some retargeted people would have bought the product without retargeting. As such, a portion of marketing dollars is wasted on some of the retargeted people. Phrased differently, not all retargeting spend on Facebook is incremental, resulting in too many customers being attributed to Facebook and, thus, to an understatement of the average customer acquisition cost (CAC).

Tatari measures TV as the incremental lift above the baseline. Performance numbers reported by Tatari do not need further adjustments for incrementality.



## Marginal Costs

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When marketers think about CAC, they tend to consider only the average CAC. While the average cost helps determine whether the channel is overall ROI positive, it does not answer a more important question: what is the cost of acquiring one additional customer? The answer to that question lies in the marginal cost.

The right amount of spend in an advertising campaign should always be evaluated at the margin and not at the average. Discerning the marginal cost of a Facebook campaign is not trivial, but it can be estimated by repeatedly measuring how many customers were acquired at different spend amounts (and finding the difference in customers acquired at each amount). If marketers don't have a precise measurement of their marginal costs, the marginal cost will usually be about double the average cost. At Tatari, TV performance is reported at the margin when evaluating networks or programs.

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## Correct Comparison

To compare Facebook with TV campaigns in a meaningful way (i.e. "apples to apples"), one needs to evaluate the Facebook CAC after adjusting for incrementality and marginal cost.

This process is illustrated in a specific client case study.

# Client Case Study

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In 2016, we looked at a Facebook advertising campaign of one of our clients. The client targeted customers through both prospecting and retargeting campaigns, resulting in the following average costs:

Campaign	Apparent Average CAC
Prospecting	\$134.42
Retargeting	\$77.49

Time period: Dec 1 - 12, 2016  
Total Spend: \$42,518

We call these average costs “apparent” because we haven’t yet evaluated them for incrementality and at the margin. The easiest way to do this is to first adjust for incrementality by accounting for cannibalization.

## Step 1: Adjusting for Incrementality

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For the Facebook prospecting campaign, we can assume a modest cannibalization rate of 25%, which means that 25% customers would have purchased the client's product without exposure to the prospecting campaign.<sup>1</sup> To derive the true average CAC of the client's prospecting campaign from the apparent average CAC, we use the formula:

### Prospecting Campaign

$$\text{apparent average cost} = (1 - 25\%) \times \text{true average cost}$$

$$\$134.42 = 75\% \times \text{true average cost}$$

$$\text{true average cost} = \frac{\$134.42}{75\%}$$

$$\text{true average cost of prospecting} \approx \$179$$

Using the same approach, we can calculate the true average CAC for the retargeting campaign. Because retargeted users have already been exposed to the client's ads during the prospecting campaign, we would expect a higher rate of cannibalization. In this case, we assume a 40% cannibalization rate. We then use the same approach:

### Retargeting Campaign

$$\text{apparent average cost} = (1 - 40\%) \times \text{true average cost}$$

$$\$77.49 = 60\% \times \text{true average cost}$$

$$\text{true average cost} = \frac{\$77.49}{60\%}$$

$$\text{true average cost of retargeting} \approx \$129$$

## Step 2: Adjusting for Marginal Costs

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Now that we have adjusted for incrementality, we know the true average CAC of the client's prospecting campaign (**\$179**) and retargeting campaign (**\$129**). Both numbers are higher than the apparent average CACs of these campaigns. This step, however, is not the complete analysis because we still need to evaluate these campaigns at the margin.

As mentioned earlier, marketers can typically estimate their marginal cost by doubling the average cost. This means that, for our client's Facebook campaign, the marginal cost of the prospecting campaign is approximately **\$358**, while the marginal cost of the retargeting campaign is approximately **\$258**.

<sup>1</sup> To learn how to precisely measure cannibalization or incrementality (as opposed to estimating it), we refer to our blog article "[Incrementality explained.](#)"

# Comparing CACs

We can now compare the apparent average CACs with the marginal CACs for the client's prospecting and retargeting campaigns on Facebook.

Campaign	Apparent Average CAC	Marginal CAC
Prospecting	\$134	\$358
Retargeting	\$77	\$258

When we look at some of the networks of the client's TV campaign in that same period, we can see that even the most expensive ones had marginal CACs that were lower than the marginal CACs of the Facebook campaign.

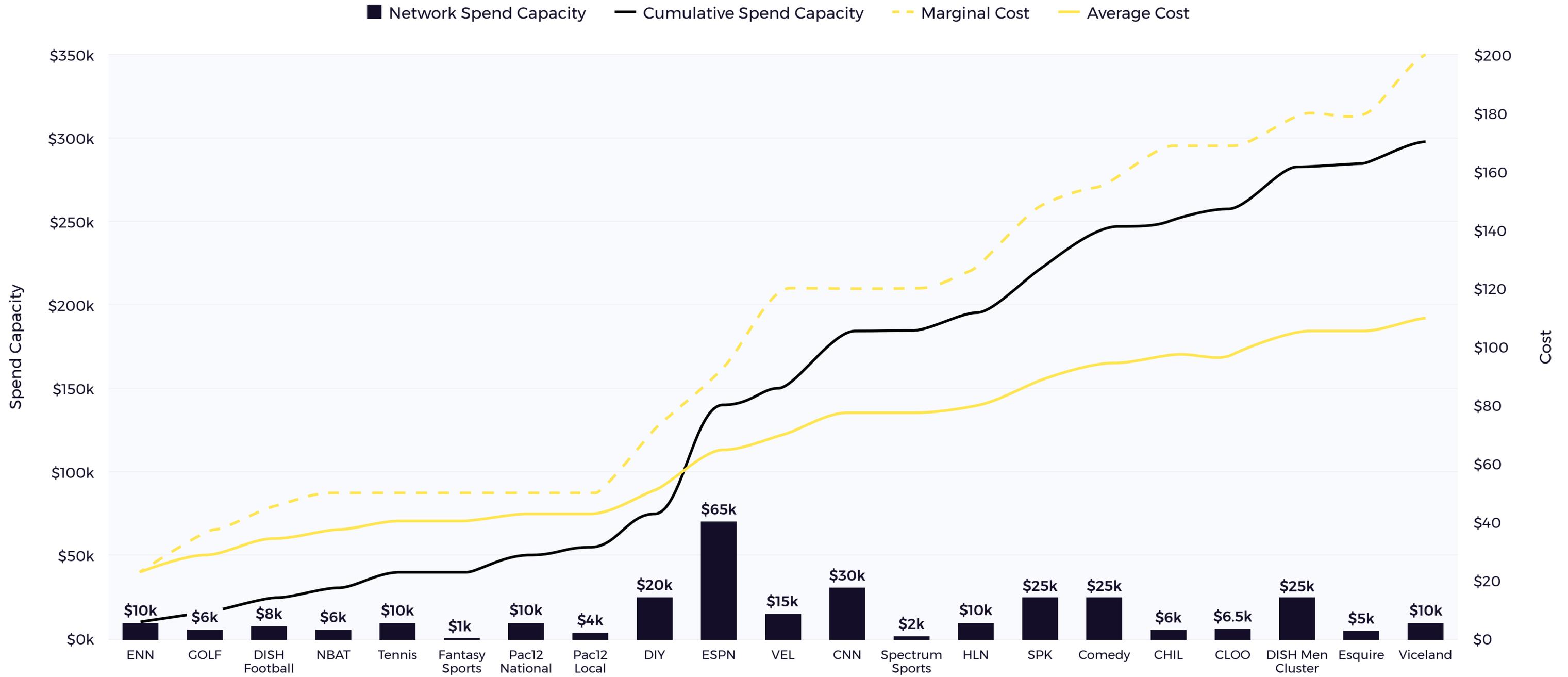
Network	Marginal CAC
DISH Thursday Night Football	\$179
Comedy Central	\$157
ESPN News	\$37
Golf Channel	\$24

Furthermore, in the case of our client, the TV ads did not have any special savings (unlike Facebook), so the TV customers were more profitable. To optimize the advertising campaigns, our client should obviously shift some of their spend from Facebook to TV, but the question is—by how much?

This is best achieved by reallocating spend from Facebook to TV in increments until the marginal costs on both platforms are equal (i.e. the marginal cost on Facebook would decrease, while the marginal cost on TV would increase). This way, we would swap expensive Facebook spend for cheap TV spend. We can best demonstrate this mechanism with the efficiency curve.

The efficiency curve gives us an overview of how spend, marginal cost, and average cost across networks relate to each other. As can be seen on the next page, networks are arranged on the x-axis in order of increasing marginal cost (i.e. from left to right), presented by the dashed yellow curve. As such, the more efficient networks, having lowest marginal costs, can be found on the left. The average cost is the solid yellow line. The black bars represent spend capacity for each network (i.e. the ability to purchase spots), while the solid black line represents cumulative spend capacity.

# The Efficiency Curve



# Efficient Allocation of Spend

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The client most efficiently allocates TV spend by starting at the furthest to the left (ENN, in this case), spending full capacity (which is \$10,000 in this instance). The next dollars are subsequently best spent on the station to the right of ENN (Golf Channel).

To shift spend from Facebook to TV, the client would move from left to right on the x-axis. With that, marginal costs would edge up as TV spend increases. Similarly, reducing spend on Facebook (to fund increased TV spend) would lower the Facebook marginal cost, falling below \$358 (prospecting) and \$258 (retargeting). Eventually, the marginal cost of the next most efficient TV network would equalize that of Facebook. At that point, we have reached an optimum.

For our client, we recommended a weekly incremental shift of \$20,000 (i.e. into TV and out of Facebook), and correctly predicted that this would boost incremental weekly sales between 400 and 800 units.





**Thank you.**

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