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The Basic Calculation

For a campaign that aims to generate sales, the steps involved in the calculation should be as follows:

1. Calculate the value of incremental sales
    First, estimate the total value of the incremental sales generated by the campaign. To do this, you will need to estimate the "base level" of sales – i.e. sales that would have been made even if the campaign hadn't run. Incremental sales is then simply:

    Incremental sales value = Actual sales value – Base sales value

    Common methods for calculating base sales include econometrics (see below) and extrapolation from previous historical trends or industry estimates. However, you should aim to find new and better ways of measuring this incremental effect.

2 Calculate incremental sales revenue

    Next, you need to calculate the incremental revenue to the client from the incremental sales. This is usually less than the incremental sales value, because retailers and other intermediaries take a cut. The calculation is:

    Incremental revenue = Incremental sales value – Intermediary margins

3 Calculate marginal contribution to profit

    Extra sales lead to extra revenue, but they also lead to extra costs. As sales go up, clients need to buy more raw materials and pay more wages.

    Incremental costs = Variable cost per unit x Incremental units

    These costs need to be deducted in order to work out the payback. The best way to do this is to work out the variable costs associated with each extra item sold, and then subtract them. The resulting number is called the marginal contribution.

    Marginal contribution = Incremental revenue – Incremental costs

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Alternatively, if you don't have P&L data, you may be able to estimate the marginal contribution by knowing the client's average profit margin:

Marginal contribution = Contribution margin x Incremental revenue

[Note that this method may underestimate payback, since the margin on an extra sale is often higher than the average contribution margin of a sale. If you can find a more accurate estimate of the marginal contribution from the client or industry sources, then consider using this figure.]

4   Calculate net profit

The net profit generated by the campaign is then simply the marginal contribution minus the cost of the campaign:

Net profit = Marginal contribution – Cost of Campaign

This is the ultimate measure of effectiveness, the measure of how much money the campaign made for the client.

5   Calculate return on investment

Net profit is the ultimate measure of effectiveness. However, you may wish to include a measure of financial efficiency as well, in which case you should calculate the Return on Marketing Investment (ROMI).

This simply expresses net profit as a percentage of campaign cost:

ROMI = (Net Profit)/(Cost of Campaign) x 100%

ROMI is a useful measure, because it allows you to compare the efficiency of different campaigns with different budgets. It also allows you to compare the return from your campaign with returns from other investments.

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Common mistakes

The IPA recently reviewed its past Award entries and discovered that a high proportion miscalculated payback in one way or another. Here are some common mistakes they found:

1   Assuming all sales growth is incremental

Your campaign may not be the only reason why sales increased. If it was, then you should make sure you have proven this beyond doubt by discounting other possible factors e.g. the good summer.

If other factors did play a role, then you should try to disentangle their effects. Econometric modelling is one way of doing this. Another is to use some kind of analysis, comparing countries where the campaign or one that was similar ran with those where it didn't.

Conversely, just because sales didn't grow very much, it doesn't mean that the campaign didn't work. Perhaps sales would have declined without it.

2   Assuming all direct sales or promotional sales are incremental

It is common practice to measure the sales effect of a piece of direct response activity (whether online and offline) by counting the number of people who responded to it, and then counting how many of them went on to buy the product.

However, this calculation assumes that all of those sales were incremental sales generated by the direct response activity. In fact, some of those people would probably have bought the product anyway, even if they hadn't been exposed to the activity.

Rigorous evaluation of direct response should take account of this. You should try to estimate the base level of sales that you would have achieved without the activity, and calculate incremental sales as in step 1 in the calculation above.

Similar problems exist when evaluating promotions. The number of packs sold on offer is not the same as the number of incremental packs sold, because many of those packs would have been sold anyway.

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3   Treating revenue as profit

Many IPA authors seem to be confused about the difference between revenue and profit. If a campaign costs £1m, and generates £10m worth of sales, then it is not true that it pays for itself 10 times over. Once the retailer has taken his cut, and the extra manufacturing costs are taken into account, it is quite possible that the campaign made a loss.

Where this is possible, entry authors should try to give an indication of the profitability of the campaign. This may be difficult, since clients are often reluctant to share data on profitability.

However, there are various ways in which profit figures can be disguised so as to avoid any fears about confidentiality.

4   Miscalculating net profit

When calculating net profit, you should subtract off incremental variable costs (the cost of extra raw materials, wages, etc.) as well as the costs of the campaign itself. You should not subtract off any other fixed costs, otherwise you will underestimate the payback from your campaign.

Similarly, if you calculate net profit by applying an average percentage profit margin to the incremental sales revenue, make sure you use the right margin. The figure you want is the contribution margin, which is the profit margin before fixed costs are deducted. Don't use the overall profit margin, otherwise you will underestimate payback.

Further refinements

The basic calculation outlined above is fine for simple marketing effects, but there are various "longer and broader" effects of communications that you may wish to consider:

1   Supporting higher prices

Rather than increasing volume, your campaign may be allowing the brand to sell a higher percentage of its

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sales volume at full price compared to on promotion, or the campaign may even have helped a brand to increase its prices. Measuring such effects is tricky, and may well require econometrics.

However, the payback calculation is basically the same as before, except that the increase in sales value comes from higher prices.

2   Reducing costs

In principle, marketing can also reduce costs. For example, trade marketing, internal communications and recruitment advertising are all likely to have an effect on costs. Measuring such effects is hard, but the payback calculations do not change significantly, except that the incremental costs now become incremental cost savings.

3   Longer-term payback

If your campaign has longer-term effects, then the payback calculations do become more complex. First, you may need to project the incremental sales, revenue and costs into the future. This will typically require some kind of forecasting model.

Second, you need to take account of the time value of money. A campaign that generates £1m over the next five years is not as valuable as a campaign that generates £1m this year.

Get a financial expert to help you here. Accountants have a technique called discounted cash-flow analysis (DCF) for dealing with this. You should always use DCF when dealing with longer term effects.

DCF allows you to calculate the "net present value" (NPV) of any flow of money over time. Use DCF to calculate NPVs for incremental sales, incremental costs and campaign costs. Then repeat the basic profit calculation outlined above using NPVs for all values.

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4   Creating options

Marketing may create options to launch new products or enter new markets. Little has been written on this aspect of marketing.

5   Changing market expectations

By improving the market's expectations of a product or company's performance, marketing may increase its financial value. Increases in the financial value of brands or in a share price can generate real financial returns for the owners. Linking these effects to marketing presents an interesting challenge to authors.

Using Econometrics

To date no IAPI ADFX entries have used econometrics and only about half of recent IPA Effectiveness Awards winners have used econometrics. Entries that did not use econometrics but still won major awards in the 2012 IPA Effectiveness Awards included Which, Nikon, the Department of Transport and Magnum Gold and are recommended reading from IAPI.

With the right data, however, econometrics can measure and demonstrate the impact your communications had on sales and profit. It can even forecast the effects of future campaigns.

This can make it an invaluable and persuasive part of the payback demonstration in your submission.

If you use econometrics, it is vital that you include an appendix in your submission with full details about the modelling process, the data used, definitions and any other material that would allow the judges to see how you have arrived at your econometrics-based claims.

This appendix should include technical information such as the particular econometric approach taken, variables used and rejected, testing methods and model structure. For these reasons it is appropriate that this appendix is written by the econometrician involved and not the case's main author (if different).