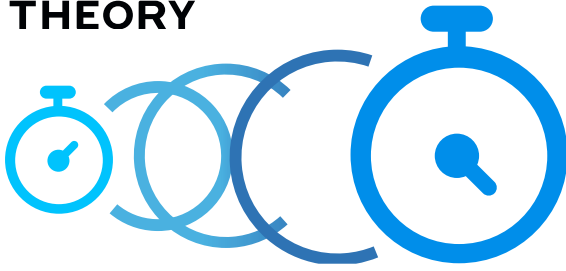


THE LONG TERM EFFECTS OF ADVERTISING



GAIN
THEORY



ADVERTISING MEASUREMENT: THE LONG TERM EFFECTS OF ADVERTISING

With so many different marketing channels out there today, it's difficult to identify what drives sales.

Gain Theory is a global consultancy that partners with brands to maximise marketing value. We provide marketing and insight professionals with the ability to make faster, smarter decisions with confidence. Confidence that their marketing budget is working as hard as possible. Confidence that they can really understand what is driving their business.

In this paper we present a new solution to an age old problem – how to effectively measure the long-term effects of advertising. Some people view this as being impossible, others do it inaccurately, but we've figured out how to get it right. Here we discuss the issues involved, dismantle existing systems and present our own solution.



- Fight back against the commoditisation trend - with a stronger and growing sales base, every other activity run by the brand will have a bigger payback.

WE NEED A FLOATING BASE

Before we come on to this, we must first look at the importance of a shifting base. This relates to a type of change to how a system is measured, against previous base reference points. It's a standard, yet fundamentally important, aspect of these types of measurement systems.

With short-term measurement methods the base is always static, which can never accurately reflect changes in perceptions, tastes and attitudes over time. In order to measure the long-term effect of advertising we must first find a way to allow the base to evolve over time.

When we talk about the long-run effect of advertising we're referring to the rate at which a brand can acquire new regular/loyal customers and regain lapsed ones vs. the rate at which customers lapse and defect to other brands. The base level of sales can vary up or down, reflecting the relative strength of each effect.

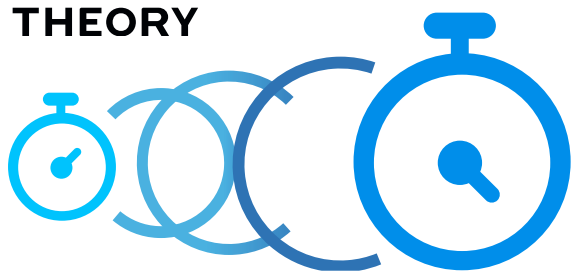
So, it all comes down to your base, and whether or not the measurement methods you are using are able to allow it to vary over time, as it will inevitably change in reality.

There are well established techniques to accurately track the effectiveness of advertising over comparatively short periods of time, but meaningful measurement over longer periods has remained elusive, until now.

WHY IS THIS IMPORTANT TO ME?

Having a more accurate view of the long-term ROI of advertising will:

- Allow for better (more effective) long-term planning;
- Enable you to allocate budget between promotions and marketing on a more rational basis – while short-term discounts drive short-term uplifts, marketing drives the base higher over a longer period (knowledge is power);



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WHAT ARE THE EXISTING MEASUREMENT METHODS, AND WHY DON'T THEY WORK OVER LONG PERIODS?

The best methodology to accurately measure the impact of one factor on a KPI such as sales growth is to use market mix modelling or econometric analysis. These methods look at all available data streams, bringing together all the information you are able to collate before searching for a combination of variables that best explains the movements in a particular KPI.

This method commonly incorporates a wide variety of metrics, taking into account everything from return on investment by media type, to the impact of competitor activity, to wider environmental factors such as the state of the economy or the weather.

Marketing mix modelling is an effective method when it comes to short-term measurement, not least because it is perfectly suited to disentangling the effects of disparate variables such as those outlined above, but it is not always geared towards understanding impacts over long periods of time.

In the absence of effective measurement marketers have previously resorted to stating that the long-term effect of campaign activity is two to three times the size of the short-term impact. This idea originated in limited shopper panel studies conducted in the US*. At best it is an oversimplification, at worst dangerously misleading.

WHAT ATTEMPTS HAVE BEEN MADE TO TACKLE THIS?

The most obvious approach is to simply allow advertising to have an impact on sales for a longer time period, or at least to test for this possibility. Chart 1 (below) shows how this test might be constructed.

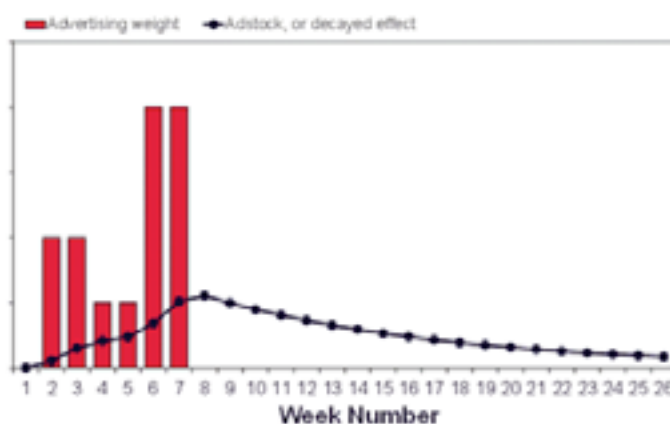


Chart 1. Decayed advertising effects, also known as Ad stocks

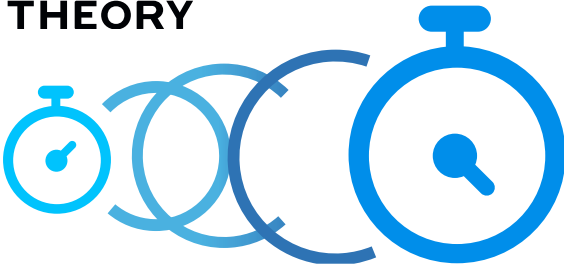
First, we take ratings or impressions in the period that consumers are exposed to them. We can then correlate these with our KPI in these weeks and test for a significant immediate impact. So far, so good.

Second, we can decay these ratings over time and see whether we can find an additional impact. Depending on how slowly or quickly we decay the advertising, we can test for an additional impact over just the next two or three periods all the way out to a year or even longer.

The problem with this approach is that it often doesn't work. Not least, this is because one often needs one factor to describe the short-term and another to describe the long-term, leading to model specification issues. And this is why many people resort to the "long-term being twice the impact of the short-term" answer.

Looking at **brand equity** is one other possible route towards overcoming this problem.

* Lodish (Marketing Science, Vol. 14, No.3, 1995) provides a useful summary of these results from packaged goods.



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For example, if you look at how first or second choice purchase considerations move over time, it is possible to draw out a certain level of understanding as to how your advertising is working over long periods.



Box 1. Brand Equity and Long-term Effects of Advertising.

Including such data in wider campaign marketing mix analysis is a relatively simple matter. It is even possible to establish which combination of media channels best moves brand equity, allowing you to plan your activity accordingly (as shown in the flow diagram in Box 1 above). So far, so good.

In practice there are three problems with the brand equity solution. Data such as this is often not available. Even if it is available data definitions change over time. And more importantly than all this, the method does not directly allow the base to change over time. The data can be smoothed to reflect long-term movements, but is still correlating with weekly movements in sales. So while it is helpful, it doesn't actually fix the fundamental problem of a static base.

Price elasticity presents a similarly interesting but limited solution. This measures the impact of sales volume in relation to price changes. Generally speaking a cut in price will see an increase in sales; the reverse is of course also true. This is a simplification but a generally accurate one.

In a world of growing commoditisation and prevalence of low cost and private label alternatives it is hard to imagine a situation where price sensitivity to a product would fall over time – therefore this provides us with another route to tracking long-term effects. If price elasticities are moving closer to zero, then in the absence of any other reason this could justifiably be said to be down to the long-term impacts of marketing. Gain Theory has many case studies showing this phenomenon, one of these is shown in Chart 2.

Here, we tracked a falling sensitivity to price over a number of years. The market was competitive, with both private label and branded alternatives available. And yet sensitivity to price fell. Marketing was working to desensitize consumers to price over a long period of time.

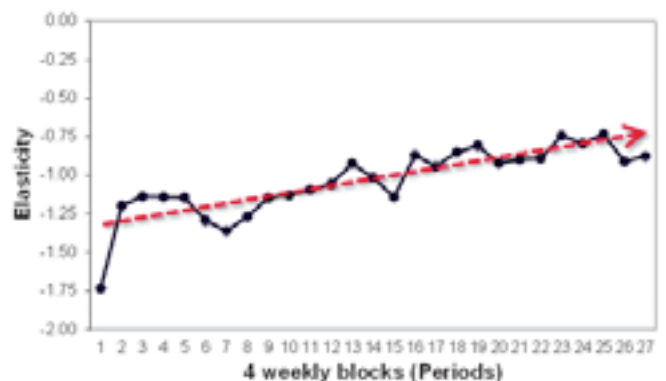
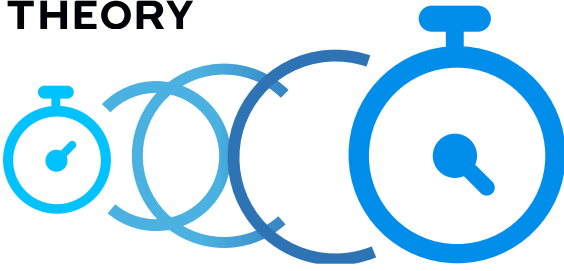


Chart 2. Example of price sensitivity declining (FMCG)

This method can produce interesting results but again it's not a real solution. It can't be applied across the board, for example it works better for some sectors (FMCG) than others (Healthcare) and for yet others not at all (Automotive). But most of all, it doesn't allow the base level of sales to change.



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WHAT IS THE SOLUTION?

By using Unobserved Component Modelling techniques we are now able to successfully measure the hidden effects of advertising over long periods. This method explicitly allows the base to evolve over time, can be tested in all circumstances and does not rely on data that might not be available.

It ticks all the boxes.

Often ideas of base changing over time are subtle and gradual, relating to shifts in consumer tastes and preferences. It's about meaningfully measuring the invisible (but vital) impacts of your advertising. For a retailer this might relate to the successful communication of a promotion or pricing strategy, which encourages new footfall, which in turn leads to some proportion of these customers staying with the brand. Unobserved Component Modelling, when used in this way, allows you to measure the entire journey.

This dynamic approach to modelling base shifts over time is complex but crucially it allows us to:

1. Establish accurately whether there is a long-term effect;
2. Identify the long-term effect; quantify it and correctly upweight the ROI;
3. Understand which factors are driving the long-term effect.

So, no longer do we have to assume that the long-term marketing ROI is two or three times the size of the short-term. We can now measure it.

Indeed, our library of cases studies based on thousands of models across all major continents would suggest that it is very unwise to use simple rules of thumb. A sample of some of our more recent results reveals long-term multipliers ranging from 1 out to 8. This is shown in the chart no. 3 below where the size and colour of the "bubble" indicates the multiplier that Gain Theory found for 30 different brands.

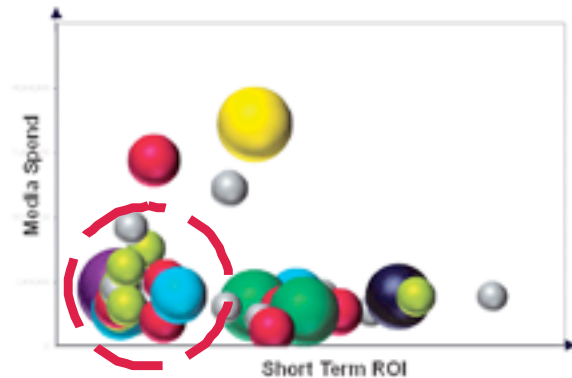


Chart 3. The Multipliers - 30 Brands Study

Looking at the circled area we can see the danger of simply multiplying the effect – all have similar media spends and short-term ROIs but vastly different multipliers to get to the long-term.

Clearly inaccurate measurement is not worth having. At best it won't help you and at worst it can lead you in the wrong direction. Accurate measurement however, particularly over long periods, has the potential to revolutionise your results.

TO FIND OUT MORE CONTACT

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