ADVERTISING AND PROFIT GROWTH

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PAN’AGRA Working Paper
No. 98-901
February 1998

Tim Ambler is Grand Metropolitan Senior Fellow at London Business School. He would like to thank Young and Rubicam for providing concepts, data and other material for this paper, and also his colleagues Kent Grayson and Flora Kokkinaki for reading and commenting on a draft.
Advertising and Profit Growth

Abstract

This paper presents a theoretical model of how advertising drives profit growth via brand equity. After summarising conclusions from advertising research, the paper reviews the Young and Rubicam BrandAsset® model of brand equity: differentiation, relevance, esteem and knowledge. They claim that brands are built in that order, and that a left to right decline in the relative strength of those four factors indicates a strongly growing brand. Once the theoretical constructs are fully in place, this model will be empirically tested.
Advertising and Profit Growth

Modern advertisers are in thrall to some strange ideas that have been around so long that we have ceased to notice them. AIDA, for example, is expecting a telegram from the Queen. The first of the persuasive hierarchy models of advertising dates from 1898. E. St Elmo Lewis originally applied it to sales. He later realised that experience had been omitted. Satisfaction was added to Attention ★ Interest ★ Desire ★ Action but AIDAS never caught on. Lewis was years ahead of the game: experience is far more important to brand choice than advertising. Despite that, the persuasive hierarchy theory, in one form or another, continues to dominate advertising thinking, especially in the USA.

In the opera, Aida was ultimately entombed and the fat lady stopped singing. That time has come. The following section deals with some conclusions from the 100 years of research since AIDA first stepped on stage. The first myth is that advertising is processed by the brain in a series of discrete stages. The “hierarchy of effects” models, of which AIDA was the first of many, dominate advertising research and all assume this serial processing. In fact, feelings and thinking happen simultaneously.

Another myth is that the measure of effective advertising is the increase in sales. As eminences such as Andrew Ehrenberg and Colin McDonald have long suggested, advertising usually has more to do with maintenance than the growth of new business. Additionally, supporting price or preserving price premia is a primary role of advertising.
Advertising, if it works at all, changes brand equity, not necessarily sales. This has implications for how effects should be measured, i.e. how ad agency performance should be assessed.

Clients need to understand, in discussion with their agency, how the advertising does/might work, in the light of latest research and thinking. They need to agree this in order to determine reasonable expectations for the advertising and how performance should be assessed.

Young and Rubicam’s BrandAsset Valuator (BAV) model uses the concept of hierarchy not in the sense of a sequence of effects in the brain (wrong) but in the sense that there is a natural order for the accumulation of positive consumer brand equity (yet to be conclusively proved but consistent with previous work). The model is reviewed and surrounding evidence thus far before, in the following section, proposing a model for correlating brand equity with business performance. Finally, I draw some preliminary managerial implications and conclusions.

Some research conclusions

Demetrios Vakratsas, now at the University of Texas in Dallas, and I reviewed over 250 journal articles and books, both scholarly and practitioner, to establish how advertising works. Advertising effects may be classified into intermediate, such as consumer beliefs

* Thanks are also due to Simon Broadbent whose *456 Views of How Advertising Works* (1992, London Business School) originally stimulated this work. The academic side of the story is available as:
and attitudes, and purchasing behaviour, e.g. on brand choice. Models have evolved in structural complexity and depth of understanding from simple cognition (knowing or rational) models (i.e. advertising is information) to models of cognition, affect (feelings) and usage experience in various combinations. Most of the research concerned fmcg.

We found seven classes of intermediate effects models and drew five conclusions:

- Experience, Affect, and Cognition are the three key intermediate effects, and the omission of any one can lead to overestimation of the effect of the others. In particular, the omission of consumers’ experience with the product will tend to over-emphasise the effect of advertising. Persuasive hierarchy models omit experience, i.e. consumer memories, altogether and are flawed for that reason alone;

- Short-term advertising elasticities are small and decrease over the product life cycle. In other words, advertising is a weak force which gets weaker still as the brand (product) matures and the consumer becomes familiar with it;

- In mature frequently purchased packaged goods markets, returns to advertising diminish quickly. A small frequency, therefore (one to three reminders per purchase cycle), is sufficient for advertising an established brand;

- The concept of a hierarchy (sequence) of effects is not supported. This may be the most radical conclusion as the idea that advertising triggers brain responses in some linear sequence dates back to AIDA and dominates US research; and

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A cognitive bias throughout research interferes with affect measurement. This bias runs all the way up the line from the assumed model of advertising affects, to the data and the way it is collected and then the ways it is analysed, presented and discussed.

In short, there must be intermediate effects because there is a time interval between the ad and consumer behaviour. Whether advertising causes, or prevents, a change in behaviour is beside the point: the effects have to be stored somewhere if they are to have any later impact at all. I except direct response advertising. Even in fmcg sector, instant coffee for example, there may be many weeks between the ad and the next purchase. We know that attitudes are important: the questions are which attitudes and how can they be measured without their disruption by cognitive bias. We also know that the effects are weak. Really big samples may help us expose small but significant variances but measurement of affective memory is difficult.

Three studies link to the measures used in the Y&R model below:

- Boulding, Lee and Staelin used PIMS data to analyse the effect of advertising and the sales force on brand differentiation. Limitations of the data, though they unpacked it in a novel way, required differentiation to be measured by price elasticity (small elasticity being equivalent to greater differentiation). One conclusion was “with respect to empirical findings, our results certainly will add fuel to the fire for the argument that advertising activities are undervalued relative to promotional activities given a long-run view” (p.171). Not all advertising was “good”: non-
unique, e.g. price promotional notices, reduced differentiation. Note that advertising is being treated in this research in price support, not sales, terms;

- Krishnan\(^2\) used an associations model of human memory with four variables: # associations, association valence, origin or source of the association and uniqueness. These correlated with the strength of brand equity as published by Landor\(^3\); and

- Lane and Jacobson\(^4\) showed that the stock market’s reaction to a brand extension was positive if the brand was perceived to have strong consumer respect and familiarity but not otherwise.

**The Y&R BrandAsset® model**

On the basis of experience and analysis, Y&R proposed that brands are driven by differentiation, relevance (to the consumer), esteem and knowledge (comprehension and perhaps intimacy) in that order (DREK). Awareness is recognised as important but is assumed as a condition precedent. In other words, DREK operates only for those already aware.

Not only is the sequence important, in their view, but the balance matters: the gradient of measures must slope down for growing brands, not up. For example, compare the DREK measures for Boston Chicken at the time of its successful initial public offering (Table 1) with those for TWA when it entered Chapter 11 (Table 2).

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Tables 1 and 2 here
The fit with the work referenced above is as follows:

- Boulding et al. agree the leading edge significance of differentiation which is widely acknowledged but less often adopted as a key measure;

- Krishnan’s variables are close to K, E/R, - and D in that order. His respondents provided the data for valence as being how they individually felt about the brand. This presumably included some elements of both relevance and esteem. The Y&R model has no equivalent to origin, or the source, of the brand associations.

- Lane and Jacobson’s respect and familiarity seem close to E and K.

Y&R validated their BAV model across two waves of global research:

Table 3 here

The primary purpose of the Y&R model is brand management in partnership: it helps to 1) diagnose problems, 2) focus briefings, and 3) focus the measurements of pre- as well as post-campaign. The theoretical justification is far less important than its empirical validity. Does it work in practice? That is a matter between Y&R and its clients. This paper, however, addresses the extent to which brand equity, as measured by this model, correlates with profit performance.

Brand equity and performance correlation - future research
At its simplest, the correlation between brand equity and profit performance is provided by the world’s stock markets. The gap between book (tangible) assets and market value grows roughly proportionately to profit which is clearly due in large measure to market based assets built by the company in past years. Not all these intangibles are brand equities. Some may be patents and R&D, some may be undervalued property but inspection of any strongly branded companies’ accounts will reveal a yawning gulf which can only be explained by brand equity.

This indicator is little more than the difference between the market’s expectation of future profits and the book assets. It is not much help to executives seeking to measure their marketing, or advertising, effectiveness.

Analysis of over 55 publicly traded US corporations where the primary brand contributes the lion’s share to earnings shows us that the notion of brand equity, measured through differentiation, is very important. Those brands that managed to grow their differentiation between 1993 and 1995 also managed to grow their operating profits significantly more than did those brands who failed to grow differentiation.2,3

A model of brand equity/performance based on DREK is set out below and comments are welcome. My intention is to test it empirically during the year. Most researchers ensure they have the answers before they publish but the theory here is strong enough to

2 Bootstrapping statistics show that the probability of finding this change in operating profit relating to differentiation merely by chance is less than 1% chance, i.e. p<0.01. (Y&R figures).
3 This is in contrast to arguments that differentiation is not key to brand success, but “salience” is. Indeed, utilising this same criterion of operating profit shows a much weaker, if any, difference between those brands that increase salience and improve their financial performance (p>0.3). (Y&R figures).
merit discussion before immersion in data issues. Advertising must change minds before it can change behaviour: the problem is finding the right measures.

This understanding is crucial: advertising effects are stored as brand equity. In the succeeding days, week and months, that brand equity may produce shareholder value in the form of sales, supported prices, reduced risk and other cash flow benefits. These are during-the-accounting-period effects. Brand equity is what is in store at any moment of time.

The modelling therefore begins by recognising the significance of the starts and ends of financial periods on measurement. The profits in any one year are assisted by past marketing efforts and diminished by investments, e.g. in advertising, which has not yet had time to pay back. Brand equity, the marketing asset, is the state of that yet to be delivered profit benefit at any point in time. Thus, for the year:

Performance = short term results + Δ10 brand equity  

where Δ10 brand equity is the change in brand equity, i.e. the asset at the end of period 1 less the state of that asset at the end of period 0.

Brand equity is a composite term for what lives in people’s heads about the brand. The “people” may be consumers, long-term most critically, direct trade customers, employees, asset managers (shareholders). This model makes a number of heroic assumptions, the first of which is that the total brand equity for all groups other than the consumer is either static &/or insignificant &/or nets out and may be disregarded.
Assuming then that:

\[ \text{Consumer brand equity} = f_t\{\text{DREK}\} \quad (2) \]

where this function allows for grossing up this single composite “consumer” to the full market. In other words we also need variables for, e.g. awareness, purchase per consumer and # potential consumers,

we have:

\[ \text{Performance} = \pi_1 + \Delta_{10} f_t\{\text{DREK}\} \quad (3) \]

where \( \pi_1 \) is period 1’s “profit”, e.g. margin less marketing/advertising costs or trading profit or the p/e ratio or some composite construct. The second heroic assumption may seem to be just looking at advertising expenditure as the performance driver. This appears to ignore:

- The quality of the creative work which I believe to be far more important than the media cost or environment in which the advertising is deployed;

- Competitive, socio-economic environmental and contextual effects; and

- The rest of the marketing mix.

In defence, this is not new. Focusing on a single variable and hoping all else remains constant is the norm. It is not as bad as it looks: we are only looking for correlation. Advertising expenditure is no more or less important than these other factors; I am
hypothesising only that advertising expenditure is itself some kind of driver of performance,

i.e. performance = \text{gn\{ad expenditure\}} \quad (4)

or \( \pi_1 = \text{gn}_1\{\text{ad expenditure}\} - \Delta_{10} \text{fn\{DREK\}} \quad (5) \)

for year 1. In other words, you are entitled to look for the profit impact for advertising in that same year, provided you adjust for the before and after brand equity.

The function of DREK needs to reflect the importance of the left to right cascade/decline. In other words, brand equity is set by the height of the D bar and it helps if R, E and K are each no higher than the one before. A dynamic brand has quite a sharp slope. One of the simplest functions takes the form A*B*C*D where

\begin{align*}
A &= 1 + (D - R) \\
B &= 1 + (R - E) \\
C &= 1 + (E - K)
\end{align*}

D, of course, remains D. Thus:

\[ \pi_1 = \text{gn\{ad expenditure\}} - \Delta_{10} \{ \text{GROSS*(A*B*C*D)} \} \quad (9) \]

where GROSS is the factor which takes care of market size, awareness and profit per unit sales.

So far, this is simply a way of expressing brand equity and its relationship with profit in any one year. Y&R seem to claim, in effect, that profit growth is a function of \((A*B*C*D)\), thus:
(π₂ - π₁)/π₁ = hn[GROSS*(A*B*C*D)] \quad (10)

where the function hn is measured at the start of period 2 or is some more sophisticated decay model, refreshed at the start of each period.

Equations (9) and (10), or some variation thereof, form the two hypotheses that I intend to test empirically in due course.

Not everyone likes equations but I make no apology for them here. Their role is to lay bare the bones of some thinking about how advertising works, i.e. how it affects profits. In exposing this thinking at this stage, the model is deliberately left open to challenge and will be improved thereby.

**Managerial implications and conclusions**

Whether advertising is a strong, or a weak, force is beside the point. It must change something and we need measures which capture those changes. Advertising can be assessed more indirectly, e.g. by sales, but they are even more influenced by other factors than what lives between our ears.

This paper first links advertising effectiveness to brand equity and then proposes a model linking brand equity with profit growth. The extent to which these links are both strong and measurable is an empirical question which a company can determine by reviewing its
own data. If this DREK model is no more than a stepping stone to something the client
and agency prefer then it will have served a useful purpose.

What is sure is that advertising, if it works at all, changes memory traces of experience,
and/or affect and perhaps cognition, probably in that order of significance. That
framework should help advertisers review their own models of advertising effectiveness.

2,500 words
### Table 1

**Successful Initial Public Offering**

**Boston Chicken**

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<th>Relevance</th>
<th>Esteem</th>
<th>Knowledge</th>
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### Table 2

**Chapter 11**

**TWA**

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### TABLE 3
Y&R’S DATA GATHERING FOR THEIR BAV MODEL

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References


