Testing the Advertising Intensiveness Law in Budgeting

Can and should managers use the Advertising Intensiveness Law in setting advertising budgets?

by

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Abstract

There is no formula for determining the ideal advertising budget and its allocation. This was true long before Lord Leverhulme exasperatedly submitted that he did not know which half of his advertising budget was being wasted, and it remains true to this day. However, in today's climate of increasing accountability and justification of all corporate expenditure, the advertising budgeting process is more important than ever.

This thesis examines whether it is prudent and constructive for a manager to use their brand's market share(specifically using the law-like Advertising Intensiveness relationship of Jones) to guide their advertising expenditure decision. Decisions regarding advertising expenditure and advertising effectiveness are really two sides of the same coin—how can one specify an amount to spend without the knowledge of what that spending will achieve? Therefore, this thesis examines the question by investigating the effectiveness of different levels of advertising expenditure.

This is important, because there is much to learn about advertising effectiveness and the setting of advertising budgets. Despite copious research into marketing and advertising that has been conducted over the last 100 or more years, the scientific knowledge base of these disciplines remains remarkably thin. There is precious little in the way of well-developed scientific principles, upon which marketing practitioners may base their expenditure decisions. Questions such as "Is my advertising is working?", "Am I spending too much, too little or about the right amount?" or "How do I justify my marketing budget [to senior management; to the finance department; or to anyone else

for that matter]?" are unfortunately questions that largely remain unanswered.

Observation in many stable markets has shown that bigger brands tend to under spend their share of market (SOM) in their advertising expenditure share of voice (SOV). This perhaps being one of the advantages of scale. In 1990, John Philip Jones formalised this observation as the norm across hundreds of markets through his Advertising Intensiveness (AI) Curve. Jones' AI relationship showed the consistency of asymmetry in the relationship, where large brands consistently under-spend (SOV < SOM), while small brands consistently over-spend (SOV > SOM).

The implication that stems from this relationship is that the AI curve indicates the expenditure level that a brand must spend in order to maintain their market share. Thus, a small brand will need to spend more than their market share to remain stable, while a big brand can spend less than their market share and still maintain their share. This is a very promising practical guide to budget setting. The inputs required for such analysis are simple metrics such as market share and the corresponding levels of advertising, which the 'reasonable' marketing manager can access quickly, easily and reliably. The analytical techniques employed are likewise parsimonious and straightforward.

This thesis, then, tests and critiques this parsimonious method of using the Advertising Intensiveness (AI) relationship, or 'law', to guide the level of advertising expenditure. I extend the test by examining the relative competitive impact of advertising on the brands within the UK Softdrinks market longitudinally over the 5 year period 2001–2005, in respect of the brands' share of industry advertising and the impact this has on relative brand performance, market share.

In summary:

My findings suggest that the Advertising Intensiveness relationship can be

used in advertising budget setting. For a marketing manager to make use of the AI relationship, a necessary pre-condition is to know with some certainty if it applies to the product category of interest, and what is its quantitative nature i.e., what this relationship 'looks' like.

The research confirmed that a Jones-like AI relationship was evident in the industry studied. Indeed, the main characteristics of the AI relationship (large brands under-spending, small brands over-spending) were shown to be remarkably robust, being consistently observed under all of the conditions studied: the relationship was observed across the entire UK Softdrinks industry as well as within two sub-markets studied (Carbonated Softdrinks and Juices and Waters); across each of the 5 years and within individual media (TV, Press, Radio, Outdoor and Cinema). This thesis therefore provides useful confirmatory support for Jones' AI relationship, and extends the known conditions under which it holds to these novel conditions. Although the present research was confined to only one industry, the extension to this range of conditions goes some way towards indicating the law-like nature of Jones' AI relationship.

I found that the specific properties of the Advertising Intensiveness relationship, namely the slope and intercept, differ quite markedly from Jones' average relationship. Thus, there is not one universal AI relationship that holds in all markets, which confirms Hansen and Christensen's (2005) findings (from single source data) and is a point which was not evident from Jones' initial aggregated analysis, though which he himself subsequently noted. This suggests that there are likely market idiosyncrasies that affect the overall relationship. Accordingly, a brand manager operating within one market cannot necessarily rely on Jones' average AI relationship, but rather, the AI relationship is best calculated on an individual industry basis from available data.

The data reveal Advertising Intensiveness relationships that are generally rather different to the overall relationship originally obtained by Jones, in

terms of both the slope and the intercept. The characteristics of the AI relationships exhibited in this industry present a rather flat sloping line with a low Y-axis intercept. Thus, the straight line indicating the AI relationship in the present data is much closer to the horizontal, X-axis (which is the line where SOV = SOM). The characteristics of these observed AI relationships are consistent with what Hansen and Christensen (2005) previously reported as being typical of high-voice, competitive markets. Observations from the present analysis and their interpretation are rather at odds with these previous findings, however. This therefore casts some doubt as to whether such structural features of the relationship are uniformly associated with industry structure as Hansen and Christensen suggest. Clearly, there needs to be more work carried out in this regard, so as to better understand the underlying mechanism of differences in the observed relationship, and whether the relationship does systematically vary based on such industry characteristics.

Furthermore, there was a rather large degree of variation around the line of best fit evident in the AI relationships, indicating a rather low, or loose, level of fit, as evinced through rather low r-squared values for the plotted AI relationships. This rather low level of fit is to be expected on two counts. Firstly, given the high level of heterogeneity among competing brands in their objectives and the possible corporate and marketing strategies undertaken to meet these objectives. Secondly, and perhaps more importantly, is the fact that departures from the overall relationship (which, of course, weaken the overall fit) are evidence of brands actually pursuing growth, or harvesting and thereby rather proving the point of the relationship itself. In the case of a perfect fit, there would be no need (and, indeed, no ability) to investigate the impact of overspending leading to growth, as such cases would not exist.

Using the AI relationship in budgeting results in what Broadbent (1989) refers to as a 'typical' share of voice, rather than an average one, where SOV=

SOM. But, if the AI relationship is to be truly useful in budgeting, then this 'typical' share of voice for a brand should relate to its maintenance level of expenditure—that level of expenditure necessary to maintain the brand's market share. Therefore, departures from this level should lead to market share increases or decreases. This thesis tested the use of the AI relationship in budgeting, through investigating the effect of following this AI-derived 'typical' advertising level over time, and examined the long-term effect of departures from this prescribed level.

In order to test the Advertising Intensiveness relationship, I adopted two novel approaches to investigate the long-term effects of over- and under-spending. The first approach investigated the market performance of different groupings of brands over 5 years. Depending on whether or not their expenditure departed from the expected level in each year, brands were classed as either consistent over-spenders (they over-spent in 3 or more of the 5 years), consistent under-spenders (they under-spent in 3 or more of the 5 years), or consistent neutral-level spenders. The second approach involved a novel alteration to the Dynamic Difference method, so that performance over 5 years was investigated, rather than the usual year-on-year performance studied with this technique. In both analyses, the AI relationship was tested through comparing the results obtained when the AI relationship was used to determine the expected level of advertising against the results when the *naïve* approach of using SOV = SOM was used.

The results from these analyses do provide support for the research hypotheses and the Advertising Intensiveness relationship generally performed well in discriminating the performance of over- and under-spenders. The analyses confirmed that consistent expenditure on advertising at the expected maintenance level over a 5 year period was related to market share maintenance, and that there was a long-term relationship between over- and under-spending

and market share change—long-term under-spenders did lose market share and long-term over-spenders did gain market share.

However, my results show only a marginal improvement made through the use of the AI method to determine the expected level of expenditure over use of the SOV = SOM method. The characteristics of the observed AI relationships in these data (not very steep lines and rather low intercepts) suggest that testing the relationship would likely be difficult. This is because for most levels of market share, the AI line is not very far from the SOV = SOM line. Therefore, for most brands there would be only a small change made to the expected level of expenditure through use of the AI relationship in place of the *naïve* method. Furthermore, the rather loose fit of the observed AI relationships would likely cloud the findings somewhat. In markets where there may be a steeper slope and a higher Y-axis, (and Hansen and Christensen have shown, in their data, that such relationships do exist in some industries) it is hypothesised that such an adjustment to the Dynamic Difference approach will yield an improved relationship.

In summarising these results, knowledge of the law-like Advertising Intensiveness relationship exists does indeed seem to provide a solid foundation upon which managers can base decisions of how to spend to achieve brand for maintenance. However, it does not necessarily provide clear predictions as to what level of growth can be achieved from what level of over-expenditure. Evidence of the generalised existence of the Advertising Intensiveness 'law' in cross sectional data does suggest the expenditure level required of a brand to maintain its market share level. And as such, it suggests (rather strongly) that if a brand were to spend less than this amount then it would decline, and if it were to spend in excess of this amount then it would increase in share. A rather good test of the law then is whether under-spending brands did lose share and conversely, that over-spending brands did gain share. In spite of the

practical difficulties in doing so (slow and small market share movements, and the potential of a myriad of other variables affecting market share) this thesis did confirm that Jones' Advertising Intensiveness 'law' does indeed indicate a maintenance level of advertising expenditure, and that brands that under-spend this level will probably lose share and brands that over-spend this level will probably gain share.

However, while the Dynamic Difference method does suggest precisely what level of investment will deliver what level of growth (over the 5 year period), the rather low level of fit of this relationship (approximately 50%) and the rather high degree of variability at the industry level means that we should be less confident in relying on this method to guide our investment (or divestment) decisions.