AN ENUMERYS GLOBAL WHITE-PAPER

An Analytic Approach to Balancing Marketing and Branding ROI

Abstract

The marketing ROI has been a topic of considerable debate between proponents of brand management and those of marketing accountability. As the brand management discipline works to leverage marketing investments to meet the challenge of an increasingly fragmented media audience, financial stakeholders of corporations demand a greater visibility into these investments. The prolific usage of scanner data based marketing mix modeling methods of marketing ROI measurement has generated additional pressure on brand-managers to demonstrate ROI on their marketing investments. Brand-managers justify their aversity to measuring marketing investments on the same ROI hurdles as other capital outlays on the basis of the long-term nature of marketing effect on sales, whereas financial stakeholders continue to evaluate those using short-term methods like marketing-mix models. This paper proposes leveraging consumer based equity measures to measure the long-term effect of marketing on sales in addition to the short-term effects measured by marketing-mix models utilizing a novel three-stage approach that is parsimonius and yet estimates a more complete measure of marketing ROI. An additional advantage would be to quantify the long-term sales impact of brand health metrics brand-managers track on a regular basis. This would bridge the gap that exists in how brands are measured and valued and the process of marketing budget allocation that eventually drives brand value.

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Introduction

Marketing expenditures in the US have grown exponentially over the past several years. If marketing were an industry it would be one of the largest, (1/10th of the US GDP at just over US$ 1 Trillion). In several industries, especially consumer goods, marketing represents more than half of total COGS, and yet there is no consensus on how to measure the financial impact of such an important part of capital expenditure. Research from leading accounting firm PricewaterhouseCoopers suggests that over 60% of majority of companies' value comprises of intangible assets. Brand value, which forms the bulk of intangible assets for several fortune 500 companieshas the ability to positively influence the consumer decision -making process and ensuring a higher price premium, both resulting in increased long-term cash-flows. In spite of this, very few models measuring marketing effectiveness include measures of brand equity as mediating variables[1].

Apart from driving sales directly, marketing is considered to be an important driver of brand equity, which itself is considered an 'intangible asset'. Marketing is assumed to have a benevolent impact on brand equity, and brand equity itself supports the brand through incremental leverage and increased marketing effectiveness. Brand equity leverages marketing and media that targets all consumers in a 'buy and hold 'approach, even if they are not customers today, with the expectation that the stored equity will provide an added leverage when these consumers are ready to become customers. But in a post Sarbanes-Oxley Section 404 world, financial stakeholders of corporations do not want to only depend on the guesstimate of the positive effect of marketing on branding and revenues, they want to quantify it so the large amount of financial resources being spent on marketing can be justified to shareholders. Branding on the other hand traditionally required large amounts of investment of both time and money based on just the expectation that they are building a positive attitude towards the brands in the minds of the consumers. This has lead to diiferences in opinion between brand-managers who base their decisions on qualitative factors and the financial stakeholders of companies, who measure investments based on the expectation of a future return on this investment.

Also from an acquisitions standpoint, now a firm can no longer just amortize the premium they paid for an acquisition over a 40 year period, instead they have to calculate every year if the goodwill, and hence brand equity/value has eroded or been impaired, which requires the measurement of brand value and how the year's

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marketing activities have affected it. All this focus and the proliferation and accessibility of high frequency sales and marketing data has lead to the development and proliferation of techniques like marketing-mix models that measure the ROI on individual marketing vehicles[2]. Models such as these measure the short-term lift in sales due to the execution of marketing activities and thus are able to quantify what proportion of sales is being driven by marketing. It would seem that CEOs and CFOs finally have a metric by which to gauge and rationalize marketing expenditure- a metric that they could really understand and compare directly to those that were already being calculated on other spending like CapEx.

Marketing-Mix Modeling using scanner data is the tool of choice for ROI measurement because of its simplicity and ability to decompose sales into baseline and marketing incremental, including sales due to each specific marketing effort. Several well-known experts from the marketing industry have both endorsed this methodology and faulted it. James Stengel, Global Chief marketing Officer for Procter & Gamble was quoted as saying that marketing-mix modeling only looks at the contribution of each element of the mix rather than 'optimizing how all parts work best together'.[3] This is not completely true as separating out the effect of each marketing-mix element on sales is only part of the marketing-mix modeling process (a very important part nevertheless). A marketing-mix model project is never complete without measuring potential sales lift from optimizing total budget allocation across all measured marketing-mix elements and also optimally allocating future marketing spend to these elements, although all businesses do not necessarily adhere to the complete process. In fact there are more advanced models in marketing literature that use a game theoretic approach to anticipate how other competing brands are likely to change their marketing mix, and utilize that information to optimize their marketing mix al[4].

Adverse Effect on Branding

So are Marketing ROI and Marketing-Mix Modeling the panacea for all that ails marketing today? Not quite. It is certainly a win for marketing accountability, but branding takes a beating. Marketing ROI as it is most commonly measured has an Achilles heel; standard marketing-mix models only account from the short-term sales lift due to marketing. Several studies, both in academic literature and in industry, have suggested a longer-term effect of marketing on sales resulting in either an improved baseline or an improved profit margin.

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Consistent and quality advertising effort tends to build increased awareness and premium associated with the brand, which results in increased 'brand equity'. Brand equity is defined as the marketing effects or outcomes that accrue to a product with its brand name as compared to the outcomes if that same product did not have the brand name[5]. Ataman et al (2006)[6] separate long-term effects of marketing into quantity premium and margin premium. They find that most of the variation in brands' quantity premiums (a brand's incremental sales relative to brands that are priced and promoted the same way) is due to advertising and discounting, and most of the variation in brands' margin premiums (the inverse of the absolute price elasticity) is due to distribution and product. Too much focus on short-term ROI results in funding being siphoned off from brand building marketing investments like media and diverted to short-term drivers like pricing and promotion instead. To make matters worse traditional media is becoming increasingly fragmented, driving down returns on mainstream media.

A study by Booz Allen Hamilton[7], points out the shift in marketing spend share from mainstream media (TV, Radio, Print) to other vehicles like consumer and trade promotions, both of which increased their share of marketing spend by 7%-8% from 2000 to 2004. The study attributes this shift more to the ease with which the return on promotional spend can be measured. But promotions do not contribute to brand equity; in fact frequent promotional discounting may even lower brand equity by commoditizing the brand through increasing consumer focus on pricing[8]. There is an ongoing shift in spend down the purchase funnel as the Booz study describes it, away from brand equity and awareness building media (long-term investment) to direct or promotional media and vehicles that have a faster turnaround and more immediate return on investment. Researchers have already highlighted the negative impact national brands are facing from private label brands by not investing enough in brand building marketing efforts. A study of American lifestyles indicated that the percentage of 20 to 29 year old consumers buying well-known brands declined from 66% in 1975 to 59% in 2000[9].

Most standard marketing-mix models and pricing and promotion analysis measure the impact of marketing and promotions via the short-term effects route. This measures the immediate effect of brand management activities on sales and enables development of tactical strategies to enhance the performance of the brand in

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the short-term (3 months to 1 year out). Promotional tactics are especially the most easily countered by competition so their effects are usually short-lived. Apart from the short-term impact, some marketing activities are also believed to have a long-term impact, which accumulates over time into an overall awareness about the product or the brand and helps to differentiate the brand from other brands. This construct is captured in the 'equity of the brand'. 'Brand Equity' has several dimensions[10].

Table 1: Brand Equity Metrics

Metric	Description
Brand awareness (unaided)	Consumer does not need to be reminded about the brand.
Brand awareness (aided)	Consumer recognizes the brand on being prompted.
Brand attributes	The consumer's perception of the brand on different attitudinal constructs like image, status and quality.
Message association	Value proposition the brand offers to the consumer.
Brand favorability	The quality and value consumers attribute to the brand above and beyond the utilitarian aspect.
Brand preference	Brand preference relative to other brands in the competitive set.
Brand loyalty	Brand's ability to drive repeat purchases.
Purchase intent	Consumer's stated desire to purchase the brand in the near future.

Of course there are some that consider the long-term just an extrapolation of the short-term and assume some blanket multiple, for instance long-term return is '2X' that of short-term. Anybody who understands media dynamics will be shaking their heads by now. Consider TV vs. Magazine; TV is very impactful in the short-term, it is very visual and delivers the marketing message very quickly and very succinctly. Magazine on the other hand delivers it message in a more gradual manner, but in much greater detail, plus it stays around for a lot longer than TV. So in the short-term TV could have a higher return than Magazine, but in the long run this

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may not necessarily be so (of course this also depends on other factors like copy, daypart, duration and circulation).

Measuring ROI as a function of Short-term and Long-term Marketing Effects

So is there a compromise between the guardians of brand equity and the advocates of ROI? The answer is an emphatic yes! The solution lies in measuring Marketing ROI as a function of both the short-term and the long-term. Different marketing measures impact short-term and long-term brand sales differently and adjusting the marketing portfolio to maximize either the short-term or the long-term alone will be sub-optimal. For example the short-term positive effect of promotions on consumers' utility induces consumers to switch to the promoted brand, but the adverse impact of promotions on brand equity carries over from period to period. Therefore the net effect of promotions on a brand's market share and profitability can be negative due to their adverse impact on brand[11].

Research from Dynamic Logic demonstrates how different elements of the marketing-mix impact different parts of the purchase funnel differently.[12] For example, Magazine advertising seems to impact all parts of the funnel more or less evenly, whereas TV and Internet advertising seems to impact upper funnel more than the lower funnel. Since sales are ultimately driven by lower funnel, this study suggests that print has twice the long-term incremental contribution of TV and Internet put together, but in general our research using marketing-mix models suggests a lower short-term contribution from print. This validates our aversity to using 'gut feel' norms like long-term equals 2 times short-term that may not be entirely backed by empirical evidence pertinent to the specific industry and category being considered.

Our recommended approach separates revenues as a function of marketing (short-term) and of brand-equity (long-term), and measures the impact of marketing on brand equity. Consumer purchase behavior for established products and brands are believed to follow a progressive series of steps, where stimuli like advertising, in-store promotions and other marketing activities, especially for established products, spur consumer purchase behavior in a semi-hierarchical manner[13]. For smaller brands, in-store promotions may have a greater impact on trial, and therefore loyalty than for established brands[14]. If one can include representative constructs of brand equity along with marketing drivers in ROI tools like marketing-mix

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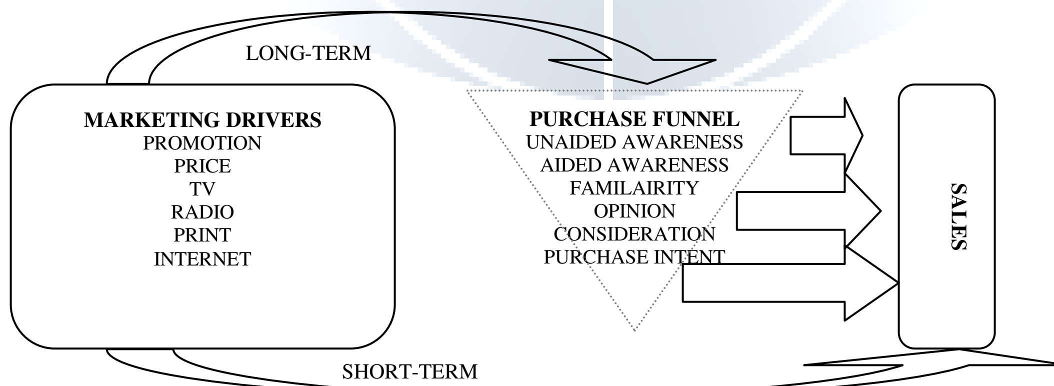
models, one can effectively triangulate both the short-term effects and the long-term effects of marketing to get a complete picture of the financial impact of marketing expenditure.

These brand equity constructs are already being collected by brand-managers in the form of brand tracking surveys. The added advantage here would be in the integration of different disparate sources of data marketing and brand-managers rely on making their decisions. The impact of Brand Equity on sales is the component most marketing models fail to capture and this is equivalent to the long-term effect of marketing on sales. As shown earlier, not all marketing activities impact brand equity similarly and not all dimensions of brand equity drive sales equally. For example advertising has a positive effect on sales ranging anywhere from 1.5 to 2 times or more of the short-term effect. Temporary price reductions on the other hand have very little or even negative effect in the long-term[15]. These effects also vary by the size of the brand. Long-term marketing effectiveness is higher for brands with higher equity and for brands with greater potential for growth[16]. This would suggest that smaller brands need to invest more in marketing activities that drive long-term growth, but research seems to suggest that small brands under-advertise and under-promote[17]. This is because smaller brands that are successful are aided by distribution breadth gains to grow faster than their category or industry, so are less motivated to rely on advertising and promotion to drive short-term growth. Now if these brands were to allocate marketing spend based on both short-term and long-term lifts, it would be able to balance short-term brand growth goals with long-term brand health and sustainability. The chart below demonstrates how brands can determine the hierarchical relationship between short-term marketing drivers, long-term brand equity and sales, using a three stage modeling process.

Figure 1: Three Stage Marketing Effectiveness Model



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The first stage is the traditional scanner data based marketing-mix model that measures the short-term lift of incremental marketing effect on sales data using time-series regression models. The first stage model also yields a measure of baseline sales in the absence of marketing. Volume contributions are converted to revenue contributions using average prices. The second stage measures the relationship of marketing activities on individual brand equity metrics measured using monthly brand tracking surveys using time-series regression models again. In the third stage all elements of brand equity are regressed against baseline revenues[18] estimated from the first stage model to measure the impact of brand equity on brand performance. Although sales can also be used in the third stage, we recommend using revenues because they not only reflect the quantity premium aspect of brand equity, but also the margin premium aspect. Brands with strong equity are able to drive greater quantity sales, resulting in higher revenues and they are able to charge a higher price premium, also resulting in higher revenues. Although the first stage model can also be estimated using revenues, it is better to estimate it with sales and then convert volume contributions to revenue contributions. This maintains a logical negative price elasticity relationship in the traditional first stage demand model. Finally long-term contributions for each marketing activity are estimated from the long-term contributions of brand equity metrics derived from the third stage model weighted by the contribution of the marketing activity to individual metrics. The illustration below demonstrates this methodology using simulated results[19].

Table 2: First Stage (Short-term) Marketing-Mix Model

	% Contribution to Revenues
Discount	25.0%
TV Advertising	6.0%
Radio Advertising	2.0%
Print Advertising	4.0%

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Table 3: Second Stage Model

	Brand awareness (unaided)	Brand awareness (aided)	Brand preference	Brand loyalty	Purchase intent
Discount	1.0%	0.0%	0.2%	1.0%	0.0%
TV Advertising	20.0%	25.0%	20.0%	25.0%	30.0%
Radio Advertising	8.0%	10.0%	6.0%	4.0%	5.0%
Print Advertising	15.0%	25.0%	25.0%	15.0%	15.0%

Table 4: Third Stage (Long-term Model)

	% Contribution to Base Revenues
Brand awareness (unaided)	10.0%
Brand awareness (aided)	8.0%
Brand preference	12.1%
Brand loyalty	7.0%
Purchase intent	8.2%

Table 5: Long-term Marketing-Mix Model

	Long-term Contribution to Revenues
Discount	0.2%
TV Advertising	10.6%
Radio Advertising	3.0%
Print Advertising	8.8%

Long-term effects in Table 5 are the contributions from Table 4 weighted by the contribution of each individual marketing activity to the corresponding brand equity metric.

The advantage of this approach compared to other long-term effects models like Persistence modeling[xx] and Dynamic Time-series Transfer Function models[xxi] is in its inherent simplicity and data flexibility. Persistence

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modeling utilizes low power unit root and cointegration tests to identify if marketing activities lead to persistent shocks to sales. The Dynamic Transfer Function model is very robust but is both complex and requires long time-series (authors in the referenced study used five years of weekly data to estimate long-term effects). Our approach can be estimated using ordinary least squares models typically used for marketing-mix models with as little as two years of data. There are two disadvantages though; first of all one would need brand equity data to be tracked on a monthly basis at least. This is not a big issue as large brands usually collect this data through tracking surveys. Secondly, the quality of the analysis is dependent on the quality of the survey sample and this can be an issue as it is important to have a panel of survey responders that is representative of shoppers in the specific category/industry being analyzed. Some studies have used actual consumer behavior rather than their responses to survey questions to infer their perceptions of brands. This has the advantage of not having any biases due to responses that may not reflect accurately consumers brand perceptions, but the disadvantage is that it limits the responses observed to brands and products purchased even though the consumer may have awareness and perceptions about brands they haven't purchased.

Conclusion

There are several different approaches that have been proposed in recent literature that attempt to measure total return on marketing investment based on short and long term effects. We have not attempted to compare results from our approach to those from other approaches and we do not claim that one is more accurate than the other. The main advantage of using a consumer based measure of brand equity while estimating long-term marketing ROI is that it establishes a direct linkage between all the marketing tactics available to a brand and how they impact the long-term evolution of the brand. Brand managers monitor brand tracking surveys to evaluate how the brand is being perceived by the consumer population, but they do not currently measure how marketing impacts each of these dimensions they measure. Establishing relation ships between marketing spend and these dimensions of brand health would allow them to optimally adjust their marketing spend to maximize both short and long term brand performance. It also makes it easier and faster for brand-managers to optimize the marketing portfolio continually to take advantage of a rapidly changing and highly fragmented marketing environment. Other approaches that measure long-term effects indirectly through the impact on

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performance measures like price premium or baseline sales miss this direct link to the consumers' perception of the brand.

As a concluding point, we should also remember that although building a strong brand is essential since strong brands have proven their ability to withstand the ravages of time, responsibility to shareholders and the rational and efficient use of financial resources is equally important. Like it or not ROI (or ROMI as some may call it) is here to stay. So the question is not whether to use this metric or not, but how to make this metric more robust and representative of the true impact of marketing investments on brand performance and sustainability.

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References

[1] K. L. Keller and D. R. Lehmann (2006) 'Brands and Branding: Research Findings and Future Priorities' *Marketing Science*, 25(6) pp. 740 - 759.

[2] Leonard M Lodish and Carl F Mela (2007) 'If brands are built over years, why are they managed over quarters?' *Harvard Business Review*, July-August, 2007

[3] James Stengel, *Wall Street Journal*, February 12, 2004.

[4] Prasad A. Naik, Kalyan Raman, Russell S. Winer (2005) 'Planning Marketing-Mix Strategies in the Presence of Interaction Effects', *Marketing Science,* Vol. 24, No. 1, pp. 25-34.

[5] Kusum Ailawadi, Donald R. Lehmann, & Scott A. Neslin (2003) 'Revenue Premium as an Outcome Measure of Brand Equity', *Journal of Marketing,* Volume: 67 Issue: 4. October 2003. pp. 1-17

[6] Berk Ataman, Harald J. van Heerde, Carl F. Mela, (2006) 'The Long-term Effect of Marketing Strategy on Brand Performance', *Journal of Marketing Research,* Forthcoming.

[7] The Future of Advertising: Implications for Marketing and Media, Booz Allen Hamilton, 2006, http://www.boozallen.com/media/file/153550.pdf

[8] Id at 6

[9] Nirmalya Kumar, Jan-benedict E. M. Steenkamp (2007) *Private Label Strategy: How to Meet the Store Brand Challenge,* First Edition, Harvard Business School Press, Boston, Massachusetts.

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[10] Adapted and modified from Dynamic Logic's Branding 101, April 2001

www.dynamiclogic.com/Branding_101.pdf

[11] S. Sriram and M. U. Kalwani (2007) 'Optimal Advertising and Promotion Budgets in Dynamic Markets with Brand Equity as a Mediating Variable', *Management Science*, 53(1) pp. 46 - 60.

[12] Dynamic Logic 'What's in the Mix?' Updated may 2006,

http://www.dynamiclogic.com/na/research/WhatsInTheMix/docs/MagazineAdvCrossMedia-BTCUpdatedMay2006.pdf

[13] Lavidge, R. and G. A. Steiner (1961), 'A Model for Predictive Measurement of Advertising Effectiveness', *Journal of Marketing*, 25, pp. 59-62

[14] Rebecca J. Slotegraaf and Koen Pauwels, (2006) 'Growing Small Brands: Does a Brand's Equity and Growth Potential Affect Its Long-term Productivity?', *Marketing Science Institute Working Paper* [06-123]

[15] Id. at 6

[16] Id at 13

[17] Id at 4

[18] Baseline revenues can be estimated by multiplying baseline volume estimated from, the first stage model with average price.

[19] Data has been simulated for illustration purposes only, although the approach can be just as easily used with actual data.

[xx] Marnik G. Dekimpe, Dominique M. Hanssens (1995) 'The Persistence of Marketing Effects on Sales', *Marketing Science*, Vol. 14, No. 1, pp. 1-21

[xxi] Id at 6

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