

Empirical Evidence of TV Advertising Effectiveness

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In this article, three hypotheses were examined that, if accepted, would lead us to conclude that the effectiveness of TV advertising has declined over time. Seven different databases - accounting for a total of 388 case histories — were accessed to conduct a form of meta-analysis to address this issue. These databases include results from advertising-weight tests, marketing-mix modeling, copy testing, return-on-marketing analysis from quasi-experimental design, and media-planning tools. The evidence we studied does not support the acceptance of any of these hypotheses, leading us to conclude that impressions from TV advertising appear to be as effective as ever, even possibly increasing in effectiveness. In terms of specific marketing objectives, the evidence suggests that the impact of TV on sales lift appears to operate primarily by generating brand awareness, suggesting that an effective marketing plan that uses TV should do so in conjunction with multiple forms of marketing in order to impact all stages of the consumer purchase process.

INTRODUCTION

Recent reports in trade journals depict a series of factors that would suggest that TV advertising has lost effectiveness. The factors that present a supposed *prima facie* case against TV advertising effectiveness include:

- the ability for viewers to control their viewing of TV commercials using DVRs for time-shifting viewing and fast-forwarding past commercials: DVR household penetration in 2008 reached 25 to 30 percent (Eggerton, 2008; Steinberg, 2008); 50 percent of DVR owners typically fast forward (Morrissey, 2008);
- reports that over half of consumers do not like TV advertising and would prefer it did not exist (Forrester Research, 2007);
- increase in TV commercial clutter; over the last 50 years, "nonprogram content" in a 60-minute prime time show has increased from 11 to 18 minutes (Papazian, 2007);
- shift in media consumption patterns that have led 50 percent of TV viewers to multitask, presumably paying less attention to TV as they are simultaneously browsing the internet, making telephone calls, reading, etc. (MRI, 2008; Papper, Holmes, Popovich, and Bloxham, 2005);
- the more compelling nature of internet advertising that can serve up contextually relevant advertising.

The purpose of this article is to factually inform this issue of whether or not the effectiveness of TV advertising has substantially decreased over time, by gleaning empirical generalizations from seven different databases.

HYPOTHESES

If TV advertising has lost its effectiveness over time, we would expect to see it manifested in a number of ways:

EMPIRICAL GENERALIZATION

Over the past 15 years, TV has not declined in its effectiveness at generating sales lift and appears to be more effective than either online or print at generating brand awareness and recognition.

H1a: *Declining elasticity*: Controlled test marketing and marketing-mix modeling should show that the efficiency of generating incremental sales as a percent of the increase in advertising pressure has declined over time.

H1b: *Declining elasticity controlling for copy effectiveness*: After controlling for differences in communications effectiveness, as measured by copy testing results, the efficiency of generating incremental sales as a percent of the increase in advertising pressure should have declined over time.

H2: *Low relative effectiveness of the TV medium*: In a marketing campaign that uses numerous advertising platforms, the contribution toward marketing objectives that is attributed to the TV advertising component should be below the contribution of other media.

DATA USED FOR ANALYSIS

Enumeration of databases

Seven organizations contributed databases that are relevant for testing these hypotheses. The databases fall into two broad classes "sales lift" (items 1- 4 below) and "cross-media comparison" (items 5-7):

1. IRI: a database of BehaviorScan controlled testing and matched market test-

ing¹ results for 125 experiments with corresponding advertising elasticity estimates;

2. PM Group: marketing-mix modeling results across 2003-2008; 37 datapoints;
3. Dratfield: multiyear trends based on marketing-mix modeling; 27 datapoints;
4. ARS@: a database of 112 cases that contain a measure of copy testing, modeling wear-out factors, and GRP adver-

Matched Market Testing evaluates market-wide programs, including increased or decreased advertising of TV, radio, outdoor, or print vehicles; new coupon strategy; or the incremental lift of a new line extension or product. IRI applies analysis of covariance (ANCOVA), which identifies and adjusts for nontest related differences across markets, achieving reliable and projectable results.

tising pressure versus the sales impact associated with advertising;

5. Marketing Evolution: $N = 40$ delivered campaign level results of "people impacted per thousand" across media touch points;
6. PointLogic: PointLogic's "Compose" methodology is based on many surveys and uses a proprietary method for analyzing the relative impact of various advertising platforms;
7. Millward Brown/Dynamic Logic: a database of 47 cases using quasi-experimental design to observe impact on dependent marketing measures for those who had the opportunity to see brand communication versus those who did not have the opportunity. Results measured test versus control.

There were 388 distinct cases for this analysis.

Scope of databases

The sales lift databases contained 301 cases that were heavily comprised of fast moving consumer goods (FMCG) (i.e., "packaged goods") cases; within that group,

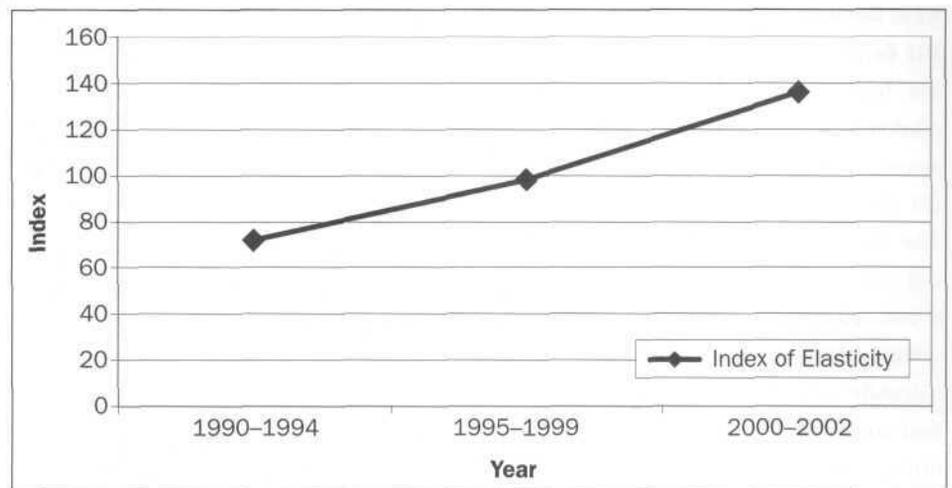


Figure 1 IRI BehaviorScan Data 1990-2002

however, there was broad diversity, as cases came from 74 different product categories across food, beverage, household, paper, OTC, baby, and personal-care products. The cross-media comparison databases had 87 cases from FMCG, B-to-B software, entertainment, automotive, electronics, pharmaceutical, service, and retail.

Analysis plan

By using a mix of different databases, the analysis can be thought of as meta-analysis (Farley and Lehman, 1986). Meta-analysis requires a common dependent variable that has been created by indexing each provider's dependent measure of sales impact across all of their cases. The average effectiveness for each case, therefore, is centered on an index of 100 within each database.

There is great value in drawing conclusions from a wide variety of different studies. Each individual database will have unknown errors, and further errors will be introduced during the analysis. By looking for patterns over studies with very different methodologies and independent research teams, we overcome the uncertainty inherent in any single study (Wright and Kearns, 1998).

RESULTS

H1A: Declining elasticity hypothesis

IRI BehaviorScan. Using addressable cable technology, BehaviorScan allows marketers to conduct media experiments across well-matched sets of consumers. IRI also conducts matched market tests. The IRI data we utilized have a control cell with nonzero advertising weight and a test cell with a substantial increase in weight. This type of test allows us to calculate advertising elasticity in a way that conforms to standard economic formulas (i.e., percent change in sales divided by percent change in advertising weight). We can calculate the resulting

lift in sales per unit of advertising in the year of the test (long-term effects excluded), average the results across all cases (within type), and then trend these indices of advertising effectiveness. The information presented here is a subset (no new cases) of the data used by Profes-

sors Hu, Lodish, and Krieger in their 2007 article.

The sales response to TV advertising appears to be increasing — not decreasing — over time (see Figure 1).

Next, we turn to marketing-mix modeling data.

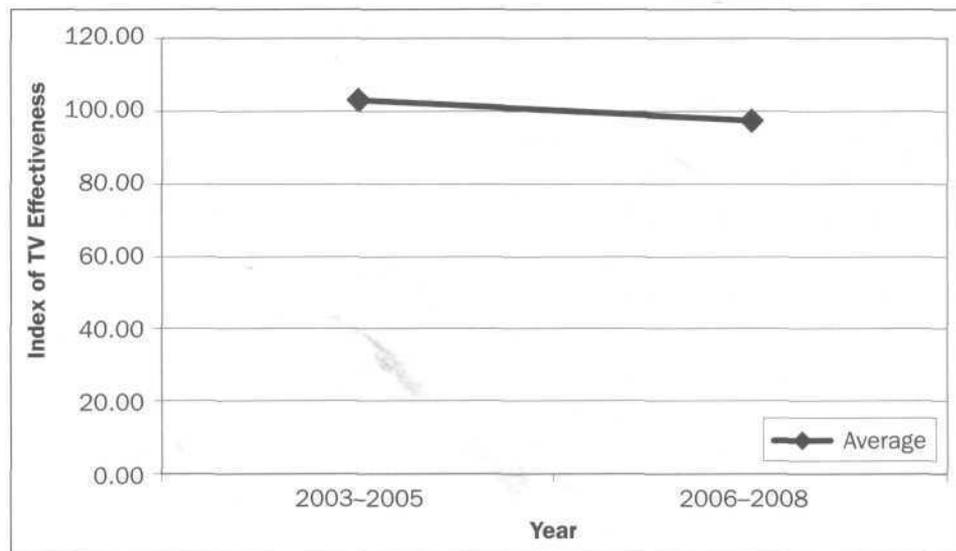


Figure 2 PM Group Data 2003–2008

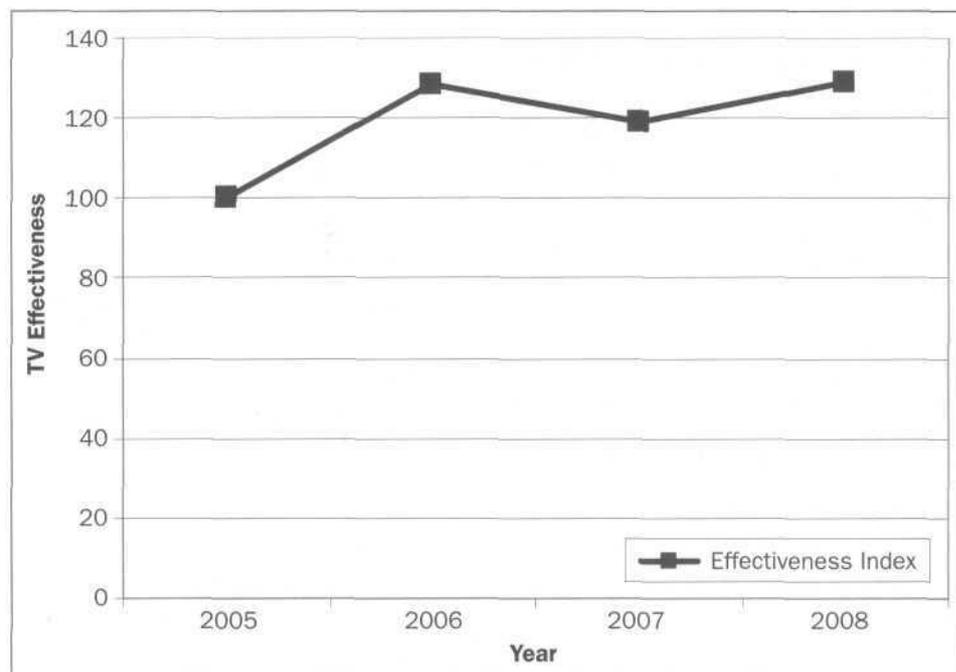


Figure 3 Dlatfield Analytics

PM Group data. The PM Group conducts marketing-mix modeling. The data we studied define advertising effectiveness in terms of sales per unit of advertising pressure and indicate a slight decline in TV effectiveness over time (see Figure 2).

Dratfield analytics. Dratfield conducts marketing-mix modeling, depicting TV effectiveness data from their databases. The definition of TV effectiveness for these purposes reflects the incremental volume per TV support metric [e.g., gross rating point (GRP)]. To be included, data came from studies that were modeled across multiple years on a similar basis to allow for comparison. Since different clients request different metrics to measure success (dependent variable), an index against the base year (2005) was created. Each year reflects a percent change in TV effectiveness versus the base year.

The results of the Dratfield database reveal increasing TV effectiveness (see Figure 3).

The observation across these three databases is that H1a cannot be accepted.

H1b: Declining elasticity controlling for copy effectiveness

To test this hypothesis, we turn to the ARS® database.² ARS asks clients to share the sales lift that is calculated from marketing-mix modeling on commercials that are tested via the ARS commercial testing system. ARS Persuasion® scores are combined with estimates of wearout (ARS R&D proves that a commercial has a predictable pattern of reduced impact over time) and the GRP weight behind the commercial. This leads to a calculation that ARS refers to as "Persuasion Points Delivered®" (PPD®). If H1b is true,

the relationship between sales impact and PPD should be changing (decreasing sales impact per PPD) over time. Figure 4 shows the result of this analysis for all cases, indicating increasing sales response to PPD.

EG1: For FMCG, the effectiveness of TV impressions at generating

sales lift has not decreased over time.

H2: Low relative effectiveness of TV medium

Next we turn our attention to the question of the relative effectiveness of TV versus other media.

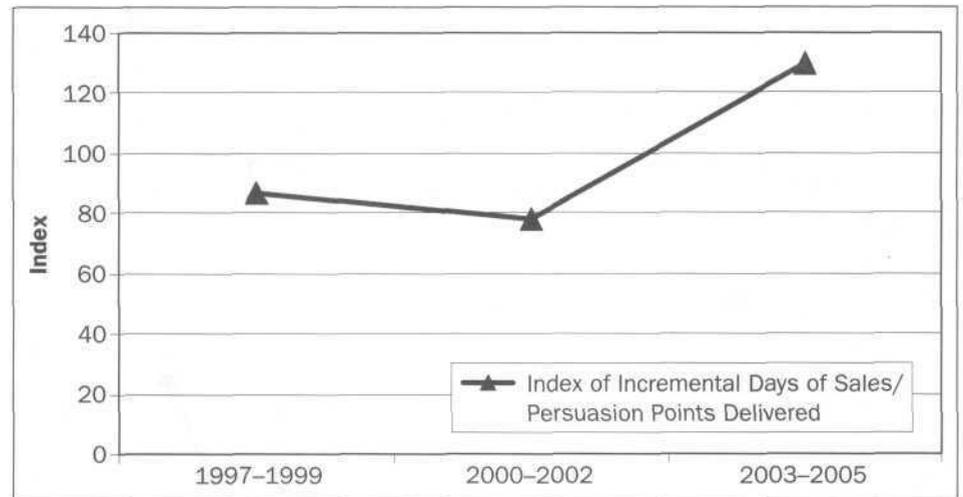


Figure 4 ARS Persuasion Points Delivered versus Incremental Sales (from Marketing-Mix Modeling) 1997-2005

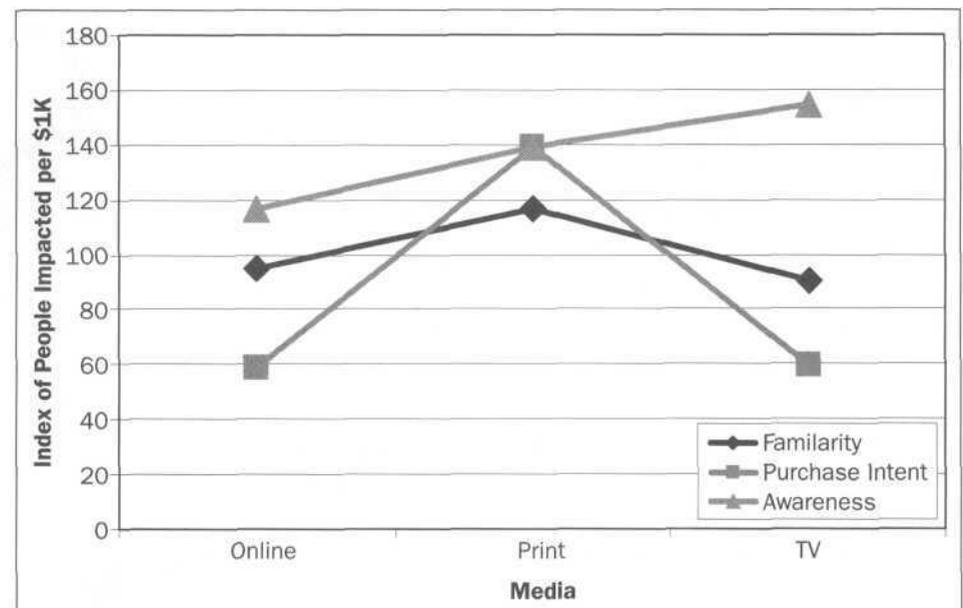


Figure 5 Marketing Evolution Data 2004-2007

²ARS®, ARS Persuasion®, Persuasion Points Delivered®, and PPD® are registered trademarks of rsc.

Marketing Evolution. Marketing Evolution uses a proprietary combination of methods for determining the relative contributions to a marketing campaign's lift in the marketing objective from the different parts of the marketing mix. (See results across 40 cases in Figure 5.)

Figure 5 shows that TV is more effective than online and print at generating awareness. TV also is effective at generating familiarity and as equally effective as online media in generating purchase intent. Interestingly, print appears to be the most effective at generating familiarity and pur-

chase intent. But relating to H2, we note that TV is not the least effective medium.³

³This analysis was done removing outliers, e.g., extreme points in the dataset that would skew the results unfairly. We used a trimmed mean, removing the 5 percent most extreme values on either end of the data distribution.

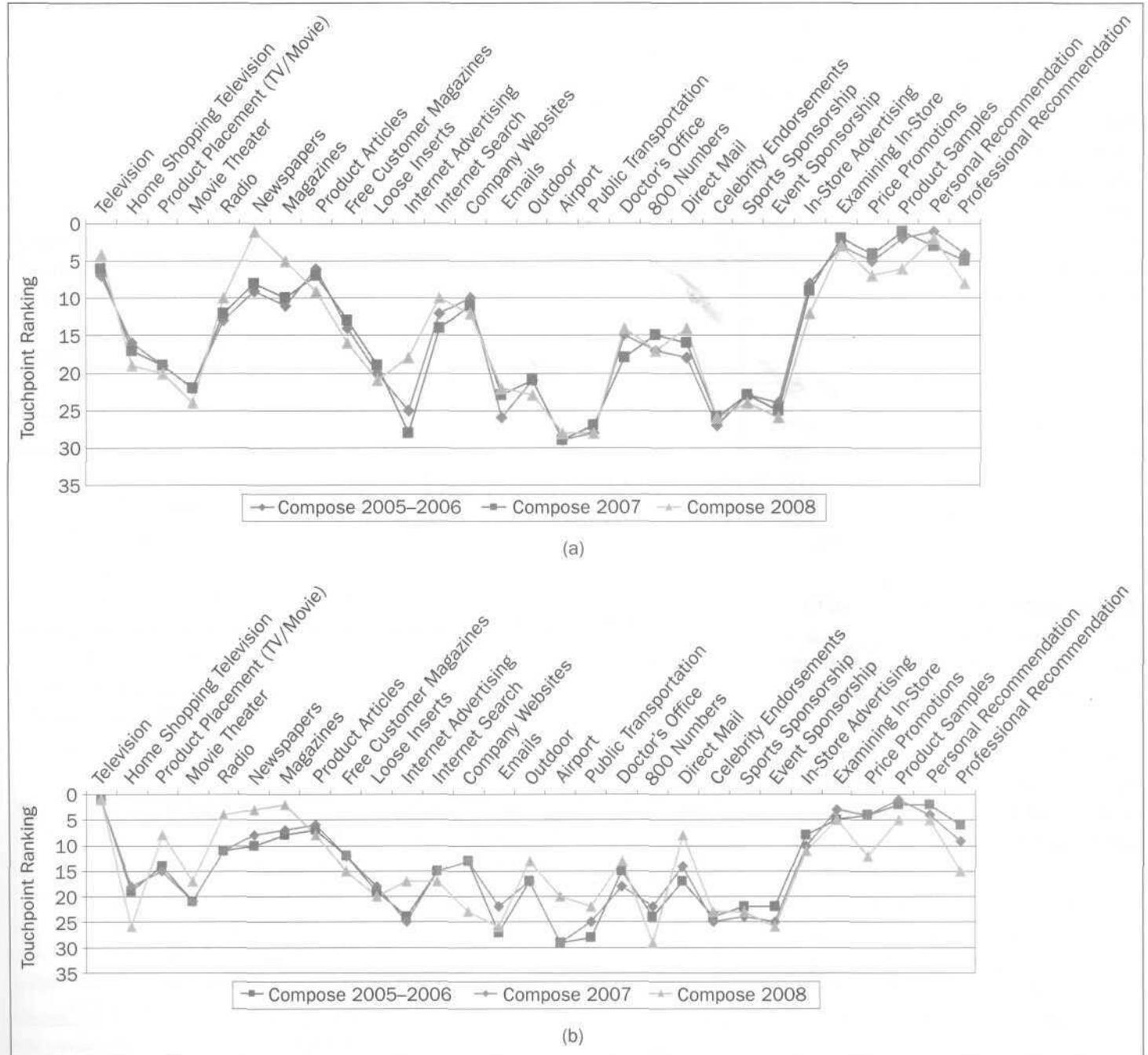


Figure 6 (a) Compose Touchpoint Rankings 2005-2008 and (b) Compose 2005-2008 Awareness Rankings

Point Logic. Point Logic's Compose method uses a proprietary approach to determine the match between a medium and the communications objective the advertiser has. Compose consists of two survey components: one is large-scale and consumer-based; the other is formed of experts from media-planning agencies. Compose also integrates detailed media-consumption and cost information. It also offers a synthesized measure of the relative attractiveness of each touchpoint for each of three years (see Figure 6a).

We note that TV's effectiveness has actually improved somewhat across these three years, moving in ranking from seventh to fourth. TV also ranks highest as an appropriate medium for generating awareness (see Figure 6b).

Millward Brown/Dynamic Logic results.

Dynamic Logic uses a quasi-experimental design to create test and control groups and determine the impact a medium has on a particular metric that reflects a marketing objective. By comparing the slopes of the lines, we can infer which medium is most effective for each marketing objective (see Figure 7a).

Those with an opportunity to see a particular TV commercial were impacted in terms of brand awareness and purchase intent (see Figures 7a and 7b). In particular, TV appears to be relatively most effective at generating awareness, which is consistent with results from Point Logic and Marketing Evolution.

EG2: TV advertising is not the least effective medium and is therefore a viable consideration for media plans across a wide variety of products and services.

EG3: TV advertising appears to be particularly effective at generating brand awareness relative to

other media touchpoints across a wide variety of products and services.

CONCLUSIONS

In this article, three hypotheses were examined that, if accepted, would lead us to conclude that the effectiveness of impressions from TV advertising has declined.

The evidence does not support accepting any of these hypotheses. In terms of marketing objectives, the evidence suggests that the impact of TV on sales lift is associated with its ability to generate brand awareness.

DISCUSSION

It should be noted that these results are shaped by marketers' choices of products/

services for which they decided to make TV a significant portion of the marketing mix. It is conceivable that TV's effectiveness is stable or increasing because marketers are getting better at deciding when to use TV in light of a growing number of available media options.

Perhaps the most important question going forward is the role that TV should play in the marketing mix relative to other media. It is important to realize that this article represents what is known about TV effectiveness through 2008. But technology will continue to change the experience that a media consumer has with a given medium and the interplay among different media. For example, TV certainly will become more interactive and targetable, perhaps even

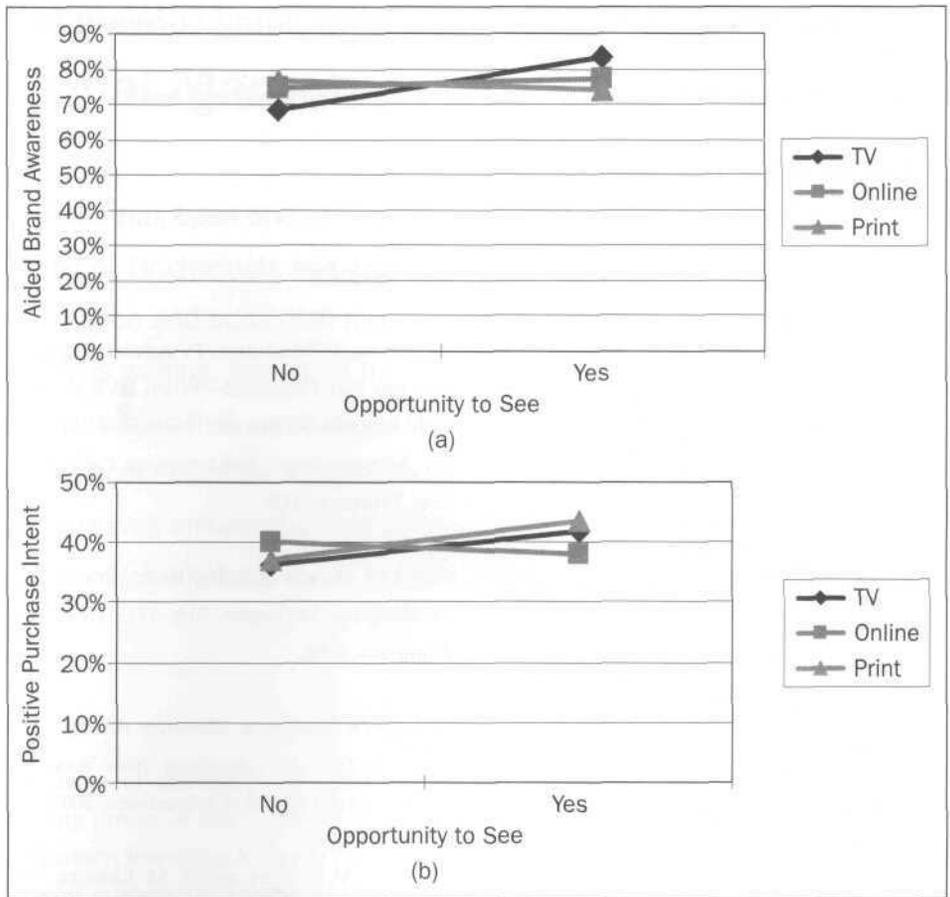


Figure 7 Dynamic Logic 2004-2008

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moving to a real-time advertisement-serving model. As the nature of a medium changes, it also affects how people use that medium and how they incorporate it into their shopping and preshopping strategies. 

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ACKNOWLEDGMENTS

The author would like to thank Dr. (Shawn) Kun Song and Dr. Raymond Pettit of the ARF for their invaluable support, contributions to the analysis, and comments on earlier drafts of this article.

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