

# Modeling Tourism Advertising Effectiveness

DAE-YOUNG KIM, YEONG-HYEON HWANG, AND DANIEL R. FESENMAIER

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*This study builds on previous research on the impact of tourism advertising and argues that there are a number of likely routes through which tourism advertising influences destination choice. Data were obtained from a survey that examined the impact of Illinois travel advertising and was conducted during the fall of 2001. The results confirm that there are strong linkages among top-of-mind awareness, ad awareness, requesting travel information, and the likelihood of visiting a destination, and therefore, these constitute important routes to influencing destination choice. Differences in the effects of advertising by media channel also appear to be substantial.*

**Keywords:** *tourism advertising; conversion studies; channel effectiveness*

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The tourism industry in the United States has grown to generate approximately \$560 billion (in 2001), including international and domestic travel expenditures, generating 7.2 million jobs and \$93 billion in tax revenue (Travel Industry Association of America 2004). Competition for these expenditures among state tourism offices has increased substantially throughout the years. According to the Travel Industry Association of America (TIA; 2001), the total budget of state tourism offices in the United States reached \$685.1 million (an average of \$13.7 million per state) in 2001. Of this amount, \$178.2 million was spent for domestic advertising and \$49.7 million for international advertising (TIA 2001). Concomitant with this growth in investments in tourism, many state tourism offices face the need to evaluate the efficacy of these programs.

In advertising effectiveness research, a considerable amount of attention has been given to the measurement of advertising effectiveness and media channel choice (Batra, Myers, and Aaker 1995; McWilliams and Crompton 1997; Woodside 1990). In tourism research, evaluating the effectiveness of travel destination advertisements has focused largely on the extent to which a promotional campaign "stimulates" visits to a particular destination. A variety of approaches have been taken, including advertising tracking studies, conversion studies, and other forms of program evaluation (Burke and Gitelson 1990; Messmer and Johnson 1993; McWilliams and Crompton 1997; Woodside 1996). Conversion studies, in particular, have been a popular approach to assessing the effectiveness of tourism advertising (Messmer and Johnson 1993; Silberman and Klock 1986; Woodside 1990) and have been widely used by state, regional, and local tourism organizations in the United States (Burke and Gitelson 1990; McWilliams and Crompton 1997;

Woodside 1990, 1996; Woodside and Sakai 2003). This approach has generally focused on evaluating individuals' responses to advertising campaigns within the context of destination awareness, visitation, and visitor expenditure. Advertising evaluation research indicates, however, that the effectiveness of an advertisement is not limited to simply the purchase of a product but rather is extended to a range of psychological and cognitive aspects related to awareness and intention that may play an important role in the purchase decision in a longer time frame (Bendixen 1993; Siegel and Ziff-Levine 1990). Thus, conversion studies often have been criticized because they neglect to reflect the underlying behavioral processes of information search and decision making as well as the changes in psychological states that might not be translated into an immediate visit to a destination (Johnson and Messmer 1997; Siegel and Ziff-Levine 1990).

Another critical issue of advertising is the choice of media channel. Different media channels are known to have their own strengths and weaknesses in delivering different types of advertisement messages (Assael 1981; Batra, Myers, and Aaker 1995; Chauduri and Buck 1995; Krugman 1969; Petty, Cacioppo, and Schumann 1983). Television, for example, is based on action and therefore more appropriate for those products requiring physical demonstrations, whereas radio is based on sound and therefore offers a different platform with which to communicate to a potential customer (Assael 1981, 1992). Owing to these differences, advertisements delivered by different media aim to address different affective and cognitive processes, and therefore different dimensions of psychological effect such as top-of-mind awareness (TOM), awareness, and intention to purchase (Assael 1981; Batra, Myers, and Aaker 1995; Krugman 1969; Petty, Cacioppo, and Schumann 1983). Thus, it is

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critical to understand the relative impact of the different communication channels for tourism marketing organizations to make better strategic decisions regarding advertisement development and channel selection. This study aims to contribute to the research in tourism advertising effectiveness by examining the salience and stability of the three primary cognitive/behavioral aspects of tourism advertising (i.e., TOM, advertising awareness, and requesting travel information) and media channel use that have been considered central routes for persuading one to visit a particular destination.

## BACKGROUND

### Advertising Effectiveness

Studies evaluating the linkage between advertising and sales have evolved from simple linear to multivariate linear models and from static to dynamic demand functions (Butterfield, Deal, and Kubursi 1998). Linear models that link related constructs to product purchase have been the most common approach for describing the relationships between attitudinal dimensions of advertising and actual purchase behavior (Colley 1961; Lavidge and Steiner 1961). The AIDA model was developed in the 1920s based on the argument that effective personal sales presentations should attract *attention*, gain *interest*, create a *desire*, and precipitate *action*. Colley (1961) proposed a model of the advertising process called DAGMAR (defining advertising goals for measured advertising) and argued that all commercial communications must carry a prospective customer through four levels of understanding: from unawareness to awareness, comprehension, conviction, and finally action. Lavidge and Steiner (1961) postulated a hierarchical sequence of effects model beginning with awareness of advertising; proceeding through knowledge, liking, preference, conviction, and intention; and ending in purchase. They argued that this model integrates the cognitive, affective, and conative stages of information processing. More recent research, however, has challenged the hierarchy-of-effects model, arguing that direct links from lower-level attitudinal dimensions to purchase behavior may be a better description of their relationships (Batra, Myers, and Aaker 1995).

Most advertising evaluation studies within the context of tourism have been based on a loose interpretation of the hierarchy-of-effects model in that they have recognized the linkages between the various attitude and behavioral components to visitation (McWilliams and Crompton 1997; Siegel and Ziff-Levine 1990) but neglected to examine the relationship among those intermediary variables. Among the advertising effects that have been considered to be relevant to visiting a destination are TOM, awareness of an advertisement, and requesting travel information, in that they represent those aspects that are central to destination decision making. Butterfield, Deal, and Kubursi (1998) found a linear link from awareness of a destination to attitude toward the destination and, finally, to the decision to visit the destination. Direct links from lower-level constructs to behavior, however, were not included within the proposed hierarchical sequential model; as a result, lower-level attitudinal dimensions were modeled to influence behavior only through other constructs. Empirical research, however, has shown significant

relationships between attitudinal dimensions of advertising effect and purchase behavior (Woodside 1996), confirming that direct links exist between lower-level attitudinal dimensions and actual visitation. Woodside (1996) also found that TOM is associated positively with preference, intentions, and visitation.

A variety of approaches have been proposed to assess the effectiveness of tourism advertisements including conversion studies (Burke and Gitelson 1990; Woodside and Reid 1974), ad tracking (Siegel and Ziff-Levine 1990), quasi-experiment (Mok 1990), and cross-sectional analysis (Silberman and Klock 1986). Conversion studies, in particular, have been the dominant approach in tourism since Woodside and Reid's (1974) early research for several reasons. It is straightforward to implement in the sense that questions regarding respondents' exposure to advertisement can be easily added to surveys of those persons contacting the travel office; thus, conversion studies provide a relatively simple measure of return on investment (ROI; Burke and Gitelson 1990). In addition, it is more feasible than other approaches in that the cost of the study is relatively inexpensive (Cai 1998).

A number of problems with this approach, however, have been documented, including improper sampling, the failure to correct for nonresponse bias, and the failure to consider sampling precision (Burke and Gitelson 1990; Ballman et al. 1984). A perhaps more fundamental drawback of the conversion study approach lies in the fact that it focuses on actual visits (Weilbacher 2003). Research in tourism advertising has recognized that the impact of advertising is not limited to actual visits but is extended to a number of psychological effects and behavioral responses (including destination image formation) that may bring about a visit in the longer term (Bojanic 1991). Thus, conversion studies have generally failed to incorporate the attitudinal/cognitive dimensions that might not bring about immediate behavioral responses but rather long-term behavioral changes. Another important drawback of the conversion approach is that it typically does not factor out those respondents who had decided to visit a destination before being exposed to the advertising; as a result, conversion rates often provide overestimated representation of ad effectiveness (Ballman et al. 1984).

True and quasi-experimental approaches have been proposed as an alternative method to conversion studies. Woodside (1990) conducted a true experiment to examine the extent to which destination advertising increases actual visits. In the study, he used experiments in the form of A-B-C splits, with C being a control group of subjects not exposed to advertising, and reported that treatment groups perform better than the control group in awareness of a destination, inquiry of travel information, actual visits, and spending. Based on the results, he argued that a true experiment is a more accurate method with which to identify the impact of advertising on actual visits than conversion studies.

Similarly, quasi-experiment is another common approach to modeling advertising impacts. In the tourism advertising studies, Mok (1990) used a quasi-experiment to evaluate the effectiveness of Hawaii Visitors Bureau's *City Magazine* advertising campaign. He compared the monthly growth rates of visits from 12 eastern and midwestern cities to Hawaii across two time periods, when advertising was placed versus when advertising was not placed in the magazine, and he concluded that there exists a causal effect of

advertising campaigns in the gross rates of visits. In particular, he focused on the ratios of gross tourism return on advertising investment compared to that of conversion study. It was reported that the financial return ratios by the quasi-experiment approach is about half of that obtained by conversion studies and is consistent with the findings of Ballman et al. (1984) indicating that ROI is grossly inflated in conversion studies.

Others have proposed a more aggregate buyer-purchase approach to advertising evaluation, suggesting that attention should focus on estimating the marginal number of visits and the economic impact of these visits resulting from the promotional effort (Butterfield, Deal, and Kubursi 1998; Silberman and Klock 1986; Wöber and Fesenmaier 2004). This approach adopts a general econometric perspective whereby travel from an "origin" (i.e., city) to the destination state is a function of the size and nature of the visitor market, distance to the state, and the size and nature of the advertising campaign, as well as its effectiveness (Butterfield, Deal, and Kubursi 1998). Thus, it is argued that if an aggregate model can be correctly specified, the effectiveness of an ad campaign can be evaluated by holding all other independent variables constant. The advantages of this approach include the relative high level of explanation, the ease of data collection, and the ability to control for exogenous factors, whereas the primary disadvantages stem from the inability to incorporate actual traveler decision-making processes (Wöber and Fesenmaier 2004).

## Media Channel Effects

Media channels are often distinguished between broadcast media such as TV and radio and print media such as newspapers and magazines (Assael 1981). Broadcast media are low-involvement and emotionally involving channels, whereas print media are generally high-involvement and rationally involving channels (Batra, Myers, and Aaker 1995; Chauduri and Buck 1995; Krugman 1969). Television, in particular, produces low personal involvement because the rate of viewing and understanding is out of the viewer's control. Instead, television is generally a nonselective medium that reaches a mass audience; offers sight, sound, motion, and color; and has intrusive power to force itself onto viewers (Nylen 1986). On-demand access provided by interactive TV is expected to allow "personalcasting" and, thus, resolve the issue of viewer selectivity (Maybury et al. 2004). There has yet to be, however, many trials to provide high-end interactive TV services; in addition, understanding of the role of advertising within the context of interactive TV, including viewers' reaction to the advertising, has not been well established (Carey 1997).

Print media, in contrast, enable the reader to set the pace, and therefore they provide the opportunity for making connections and dwelling on points of interest (Assael 1992). The result is that print media provide, arguably, a more comfortable learning environment whereby information can be more easily absorbed and integrated. For instance, magazines offer high-quality reproduction and good color, but most importantly, they are a self-interest medium for readers. Moreover, magazines offer longer life than most media (Nylen 1986). Thus, persuasive messages using print media are more likely to lead to a long-lasting change in attitude and behavior (Petty, Cacioppo, and Schumann 1983). It is,

therefore, logical to assume that television is a more effective medium for quick messages, whereas print media are expected to be more effective in persuading consumers when brand alternatives must be carefully compared. In addition, TV advertising is designed to maintain familiarity with a brand and reinforce positive experiences, whereas those delivered by print media are likely to lead to favorable behavioral response.

Interactions between various dimensions of advertising effect and media channels appear to be apparent when different functions and credibility of media are considered. Following Fernandez and Rosen (2000), advertising can be classified in terms of function: brand building and directional. Brand-building advertising is synonymous with product advertising and is commonly seen in traditional mass media, including TV, radio, magazines, and newspapers, whereas directional advertising is designed to reach a mass audience by using a tactic of intrusion aimed at helping consumers locate suppliers of desired products and services, and includes advertising in yellow pages, a newspaper classified section, movie listings, and industry guides (Wang et al. 2002). Recent studies indicate that the effectiveness of advertisements in directional media differ substantially from those in traditional mass media. For instance, advertisements in directional media are placed in goal-oriented and highly organized settings that allow consumers to collect and process information at a desired pace; conversely, ads in traditional mass media can be within a distracting and unorganized environment in which little room is spared to the audience to critically evaluate the quality of the product and services (Fernandez and Rosen 2000). Studies have also confirmed that advertising placed in a more credible medium such as a newspaper is perceived as more informative, reliable, and believable, whereas advertising placed in a less credible medium like TV is considered to be less informative (Bauer and Greyser 1968; Larkin 1979). Thus, this research posits that there are important interactions between consumers' attitudes, awareness, and behavior and media channels, and these interactions are influenced by the characteristics of media.

## HYPOTHESES

Following McWilliams and Crompton (1997) and Woodside (1996), a simple framework for advertising channel effectiveness was conceptualized that relates TOM, awareness of advertising, and requesting travel information before an actual visit to a destination (see figure 1). This framework links media channels through cognitive/behavioral responses to actual visitation (Holman and Hecker 1983; Pechmann and Stewart 1990; Woodside 1996). It is also believed that specific media channels (e.g., TV) are likely to be more effective in promoting a specific response (e.g., TOM) but less influential in promoting other responses (e.g., requesting travel information). More specifically, broadcast media, especially TV, are anticipated to be more effective in stimulating responses such as TOM and awareness in the sense that they deliver quick messages aimed at reinforcing positive image; print media, in contrast, are expected to be more effective in persuading potential visitors to request information about the destination, thereby allowing comparison with



other alternatives (Assael 1981; Nylen 1986). Thus, the following hypotheses were evaluated:

- H<sub>1</sub>: The relationships between top-of-mind awareness, advertisement awareness, requesting travel information, and visiting the destination and media channel differ significantly.
- H<sub>2</sub>: Top-of-mind awareness, advertisement awareness, and requesting travel information are positively related to the likelihood of visiting the destination.
- H<sub>3</sub>: Significant interactions exist among top-of-mind awareness, advertisement awareness, requesting travel information, and media channels in predicting the likelihood of visiting a destination.

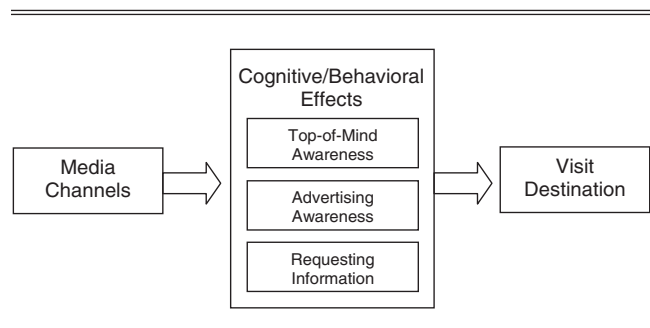
## METHODS

The data used for this study were obtained from a survey conducted for the Illinois Bureau of Tourism in the fall of 2001. The primary goal of the study was to assess the impact of Illinois travel advertisements delivered through different media (i.e., TV, magazines, newspapers, radio, and Internet) from August 15 to November 18, 2001. The sample was obtained from the Market Facts Consumer Opinion Panel, which consists of more than 500,000 U.S. households and is maintained to reflect the overall U.S. population both geographically and demographically. For this study, 1,000 households in the Market Facts Consumer Opinion Panel were contacted whereby subsamples of 200 randomly selected households were drawn from each of the five destination marketing areas (i.e., Chicago, St. Louis, Rockford, Champaign-Springfield-Decatur, and Bloomington-Peoria) targeted in the fall 2001 advertising program. The survey was sent to the recorded household head and was conducted throughout a 6-week period (from November 29, 2001, to January 14, 2002). To increase the return rate, a reminder postcard was sent to the sample a week after the survey kit was mailed out, and a number of financial prizes (16 prizes ranging from \$200 to \$25) were offered as incentives. This effort resulted in 651 completed responses for a 65.1% response rate.

The survey was composed of 34 questions focusing largely on respondents' awareness of various midwestern states and cities as travel destinations, their awareness of the tourism advertising efforts of each state and city, and their use of travel information in destination decisions. Each respondent was asked if he or she had taken any pleasure trips to or through the state of Illinois during the time period. Additional information regarding the nature of the most recent trip was obtained from those indicating that they had visited the state of Illinois from August 15 to November 18, 2001.

Preliminary analyses using chi-square tests were conducted to investigate the extent and nature of response bias. Specifically, respondents were compared to the overall sample using the social, economic, and geographic information provided for each household of the Market Facts Consumer Opinion Panel. The results of these analyses indicated that the respondents differed significantly ( $\alpha = 0.05$ ) in terms of age and income. A weighting scheme was then developed that weighted each of these aspects such that the resulting sample resembled exactly the original sample of 1,000 households included in the study.

**FIGURE 1**  
**A CONCEPTUAL FRAMEWORK**  
**OF TOURISM ADVERTISING EFFECTS**



Top-of-mind awareness of Illinois as a tourism destination was measured by asking respondents to indicate (1 = *yes*, 0 = *no*) those midwestern states and cities that come to mind when thinking of one-day or longer pleasure trips. Eight states (i.e., Illinois, Indiana, Iowa, Michigan, Minnesota, Missouri, Ohio, and Wisconsin) and four major cities (i.e., Chicago, Detroit, Minneapolis–St. Paul, and St. Louis) within the Midwest were provided as possible answer categories. For this study, those who checked Illinois, Chicago, or both were identified as considering Illinois as a solicited TOM destination. To measure advertisement awareness, respondents were then asked to indicate (1 = *yes*, 0 = *no*) if they had seen or heard any travel-related advertising about the eight states and four major cities within the study time frame. Those persons having indicated that they had seen or heard tourism advertisements about Illinois or Chicago were then asked to identify (1 = *yes*, 0 = *no*) which among the five media channels (TV, magazines, newspapers, Internet, and radio) they had seen or heard the Illinois tourism advertising. In addition, the respondents were asked whether they had requested travel information from an Illinois or Chicago tourism office (using a toll-free telephone number or the Internet) and if they had traveled to Illinois during the study time frame (both dichotomous responses where 1 = *yes*, 0 = *no*).

## RESULTS

Data analysis included a 3-step process. First, the various responses to the advertising campaign were identified following the structure proposed by McWilliams and Crompton (1997). Specifically, the probabilities of visiting Illinois given different advertisement contact situations were compared to better understand the variation in response to the state's tourism advertising campaign. Second, a correspondence analysis was conducted to examine the extent to which each media channel related to the respective attitudinal and behavioral response variables. Third, logistic regression analyses were used to examine the extent to which TOM, awareness of Illinois tourism advertisements, requesting travel information, and media channels influenced actual visitation to the state.

### Distribution of Responses

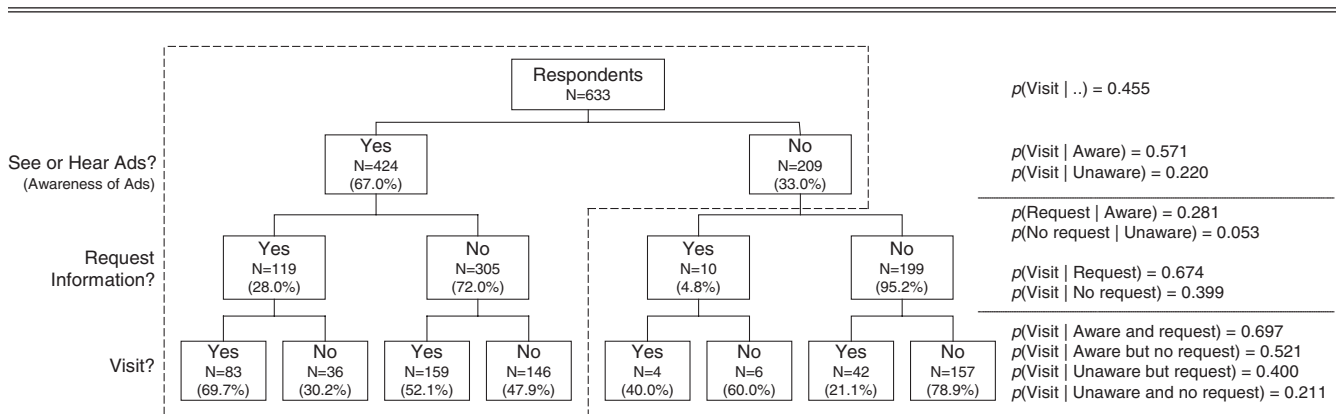
Responses to the Illinois tourism campaign are shown in figure 2. Approximately 67% of respondents reported that

**TABLE 1**  
**CROSS-TABULATION OF ILLINOIS ADVERTISING EFFECTS BY MEDIA CHANNEL<sup>a</sup>**

	Illinois as Top-of-Mind Awareness (TOM)	Awareness of Illinois Ad	Requesting Illinois Travel Information	Visiting Illinois
TV	222 (34.1%)	329 (50.5%)	97 (14.9%)	180 (27.6%)
Magazine	95 (14.6%)	136 (20.9%)	54 (8.3%)	89 (13.7%)
Newspaper	123 (18.9%)	182 (28.0%)	61 (9.4%)	112 (17.2%)
Internet	12 (1.8%)	16 (2.5%)	5 (0.8%)	11 (1.7%)
Radio	67 (10.3%)	100 (15.4%)	30 (4.6%)	61 (9.4%)
<i>N</i> = 651				

a. Based on multiple responses. Values reflect the percentage of the overall number of respondents.

**FIGURE 2**  
**DISTRIBUTION OF RESPONSES TO ILLINOIS TOURISM CAMPAIGN**



Note: McWilliams and Crompton's (1997) taxonomy is depicted in the box enclosed with a dotted line. Eighteen cases with a missing value in any of 3 variables were excluded from the calculation of probability. Source: Copyright 1997 by Elsevier. Used with permission.

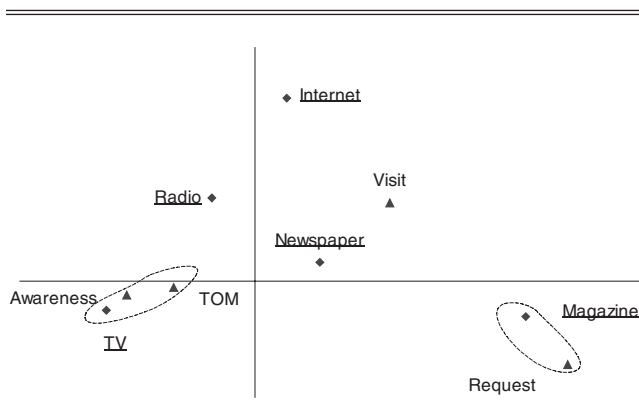
they actually saw or heard Illinois and Chicago tourism advertisements during the previous travel season. Among those who were exposed to Illinois advertisements, 28% indicated they requested travel information, and 5% of those who had not seen or heard Illinois advertising requested travel information. Importantly, those with the highest probability of visiting the state are the group of respondents who were aware of advertisement and requested travel information ( $p = 69.7\%$ ), whereas the lowest visitation rate was for those people who were not aware of Illinois tourism advertising and did not request travel information ( $p = 21.1\%$ ). Further analysis documents differences in the likelihood of visitation by response, that is, consideration of the relationship between "awareness" and "visitation" shows a significant difference:  $p(\text{visit}|\text{aware}) = .57$  versus  $p(\text{visit}|\text{unaware}) = .22$ . That is, about 57% of people who were aware of Illinois advertising actually visited Illinois, whereas only 22% of those who were not aware of the state's tourism advertising visited Illinois. Furthermore, the probability of visiting Illinois given one has requested travel information ( $p[\text{visit}|\text{request}] = .67$ ) was significantly higher than among those who did not request information ( $p[\text{visit}|\text{no request}] = .40$ ). It is, however, important to note that the conversion rates for those who were not exposed to the Illinois advertisements or who did not request travel information were substantially higher than zero, indicating that the conventional conversion rate that is based exclusively on those who were aware of

advertisements and requested information provides a significant overestimation of advertisement effectiveness. That is, given the possibility of visiting Illinois without an awareness of tourism advertisements is .22, the "true" conversion rate of Illinois advertising is approximately .35 (the difference between  $p[\text{visit}|\text{aware}]$  and  $p[\text{visit}|\text{unaware}]$ ) instead of .57.

### Channel Responses

The second phase of the study sought to identify the relationship between media channels and the cognitive/behavioral effects of TOM, advertising awareness, and requesting travel information. A cross tabulation was first conducted between media channels in which respondents saw or heard Illinois travel advertisements and the four advertising cognitive/behavioral effect measures, and was used as the basis for correspondence analysis (see Table 1). Television is clearly the most "powerful" media channel, ranking first among all four effects; newspapers consistently ranked second, with magazines a close third. Interestingly, the Internet was clearly the least used media channel within the context of travel planning. This table also shows that considerably more respondents were aware of Illinois advertising than considered the state part of their TOM; in addition, a greater number of respondents visited the state than requested travel information. Lastly, it appears that the number of respondents indicating that Illinois was included in their TOM is consistent with visitation to the state. These findings seem to confirm the

**FIGURE 3**  
**THE RELATIONSHIP BETWEEN ILLINOIS MEDIA CHANNELS AND ADVERTISING EFFECT MEASURES**



findings that TOM, advertising awareness, and requesting travel information are not hierarchical as they relate to visitation.

Correspondence analysis was then conducted to examine the underlying relationship between the respective advertisement response measures and media channels; the results of this analysis are summarized in figure 3. The 2-dimensional solution explained 98% of the variance in the data with the horizontal axis accounting for 85% and the vertical axis accounting for 13%. The results support Hypothesis 1, indicating that television is a medium channel useful in building TOM and advertisement awareness. Magazines, however, appear to be more closely linked to peoples' requests for travel information. It is notable that the results for the other media included in the study (i.e., Internet, newspaper, and radio) were not clearly related to any of the various advertising effect measures.

### Relationship among Advertising Effect, Media Channel, and Visitation

A series of logistic regression analyses was conducted to examine the extent to which TOM, awareness of advertisement, and requesting travel information directly influence the likelihood of visiting Illinois (Hypothesis 2). Logistic regression analysis was used because it enables one to directly examine the salience and stability of the relationships among media channels, advertising effect measures, and the choice to visit Illinois; in addition, logit analysis is robust to the potential impact of dichotomous variables. Models 1 and 2 were estimated first to assess the influence of TOM, advertisement awareness, and requesting information on the likelihood of visiting Illinois with the presence of exogenous demographic variables such as a gender, residency, and household income (see Table 2). The results show that the three demographic variables have significant correlations but explain very little variation ( $R^2 = 0.057$ ) in the probability of visiting Illinois (Model 1). The three advertising effect variables (i.e., TOM, advertisement awareness, and request information) were then added to the logit analysis (Model 2). Comparison of the two models indicates that the addition of TOM, advertisement awareness, and requesting information to Model 1 improved significantly model

performance; Model 2 explains about 28% of the variation in the probability of visiting Illinois. As can be seen, the three attitude/behavioral effect variables significantly and positively influence the likelihood of visiting Illinois (supporting Hypothesis 2); advertising awareness (beta = 1.29) appears to have the greatest effect, whereas TOM has the least (beta = 1.10). Exponential transformation of parameters indicates that those who first think of Illinois as tourism destination state, who are aware of Illinois tourism advertisement, and who have requested travel information are 2.9, 3.6, and 3.1 times, respectively, more likely to visit Illinois than their counterparts.

A third analysis was conducted to examine the importance of media channels within the context of destination choice. As can be seen in Model 3, the results indicate that the media channels used in learning about travel to Illinois were not significant in predicting the probability of visiting the state; none of the  $p$  values for the individual channels was significant, and the change in  $-2 \log$  likelihood was not significant ( $\chi^2 = 3.85$ ,  $df = 4$ , sig. = .427). Interestingly, this finding seems to contradict the results of the correspondence analysis, indicating that there are clear linkages between TV and awareness and TOM and magazine and requesting travel information. Based on further consideration of the results of the logit analysis and the literature discussed previously, however, it was posited that an interaction exists between media channels and the attitudinal/behavioral, and these interactions influence actual visitation. Based on this argument, all possible media channel interactions were incorporated into Model 4. It is important to note that the main effects for media channels were not included in Model 4 because awareness of advertisement was defined as the frequency of media channel use, and, thus, interactions between awareness and media channels become identical to the main effects. The results shown in Table 2 indicate that Model 4 with all the interaction terms between media channels and ad effects explains about 34% of the variation of the likelihood of actual visitation and provides a significant improvement in model fit as compared to Model 3 ( $\chi^2 = 32.63$ ,  $df = 8$ , sig. = .000). The results indicate that specific media channel interactions (i.e., Newspaper  $\times$  TOM, Newspaper  $\times$  Awareness, and TV  $\times$  Request) were significant factors in predicting the likelihood of visiting Illinois (supporting Hypothesis 3). The results also show that requesting information associated with printed advertisements (i.e., magazine and newspaper) increases the likelihood of visiting the state, whereas the same behavioral response associated with broadcast advertisements (i.e., TV and radio) does not necessarily increase the likelihood of visiting Illinois. Lastly, newspapers seem to be a very effective media channel that positively influences the probability of visiting Illinois if it can evoke TOM and request information requests.

### CONCLUSIONS AND IMPLICATIONS

The results of this study provide valuable insights into understanding the nature and impact of tourism advertising. First, it was observed that conversion rates that are exclusively based on those who are aware of tourism advertising and/or requested information create the possibility of a significant overestimation of advertising effectiveness. That is, the main goal of conversion studies is to measure the extent

**TABLE 2**  
**THE RELATIONSHIP AMONG ADVERTISING EFFECT, MEDIA CHANNEL, AND TRAVEL TO ILLINOIS**

	Model 1		Model 2		Model 3		Model 4	
	Parameter Estimates	<i>p</i>	Parameter Estimates	<i>p</i>	Parameter Estimates	<i>p</i>	Parameter Estimates	<i>p</i>
Constants	-.953	.000	-2.982	.000	-3.013	.000	-3.043	.000
Demographic variables								
Male respondent	-.586	.004	-.269	.225	-.249	.270	-.209	.368
Illinois residents	.566	.007	.882	.000	.900	.000	.922	.000
Income <sup>a</sup>								
\$30,000-\$74,999	.541	.008	.689	.004	.695	.003	.696	.004
\$75,000 and up	.676	.002	.740	.002	.725	.004	.753	.003
Ad effects								
Top-of-mind awareness (TOM)			1.078	.000	1.099	.000	1.049	.000
Advertising awareness			1.289	.000	1.342	.000	1.519	.000
Request information			1.120	.001	1.003	.005	3.428	.055
Media channels								
TV					-.219	.403	—	—
Magazine					.391	.112	—	—
Newspaper					-.056	.808	—	—
Radio					.159	.529	—	—
Interaction								
TV*TOM							-.505	.208
TV*Awareness							.069	.850
TV*Request							-3.794	.041
Magazine*TOM							-.741	.162
Magazine*Awareness							.577	.146
Magazine*Request							1.302	.177
Newspaper*TOM							1.427	.003
Newspaper*Awareness							-1.102	.004
Newspaper*Request							2.009	.062
Radio*TOM							.467	.400
Radio*Awareness							-.107	.807
Radio*Request							-1.581	.168
Model $\chi^2$ ( <i>df</i> , sig.)	28.30 (4, .000)		153.86 (7, .000)		157.71 (11, .000)		190.34 (19, .000)	
$\chi^2$ change ( <i>df</i> , sig.)	28.30 (4, .000)		125.57 (3, .000)		3.85 (4, .427)		32.63 (8, .000)	
Nagelkerke $F^2$	.057		.284		.290		.342	
Overall correct %	59.4		69.5		69.7		72.8	

a. In comparison with the *less than \$30,000* income group.

to which travelers visit a destination as a result of exposure to advertising (Woodside and Dubelaar 2003); in this study, the conversion rate (i.e.,  $p[\text{visit}|\text{aware}]$ ) was 57.1%. It is clear, however, that there are a number of people who visited Illinois *without* being exposed to its tourism advertising; in this study, 22% of those persons not aware of Illinois advertising actually visited the state. Thus, it is argued that this rate of visitation ( $p[\text{visit}|\text{unaware}]$ ) should provide the base for comparison in evaluating advertising effectiveness whereby the adjusted conversion formula should be as follows:

$$\text{Adjusted conversion} = p(\text{visit}|\text{aware}) - p(\text{visit}|\text{unaware})$$

The results also indicate that there is a strong linkage between TOM, awareness of ads, and requesting travel information and the likelihood of visiting a destination, and that there are significant interactions between media channels and response. The three research hypotheses regarding different effects by media channels, relationships among intermediary variables and actual visits, and interaction between media channels and different dimensions of advertising effect were all supported. The findings confirm the results of

previous studies indicating that the role of advertising is not limited to stimulating visits to a destination; rather, it includes exposing the destination to potential travelers, creating a positive image of the destination, and stimulating a preference for the destination that would eventually lead to an actual visit in the long run (Bendixen 1993; Bojanic 1991; Weilbacher 2003). Television appears to be more effective in stimulating TOM and ad awareness, whereas print media are more closely linked to requesting travel information. Furthermore, newspaper advertisements appear to be a relatively effective channel when successfully evoking TOM and information requests, whereas evoking information requests through television appears not to be an effective tourism promotion strategy. Thus, it is confirmed that these specific interactions represent the most effective routes to influencing destination choice.

It is important to provide a word of caution regarding generalization of the results of this study because it represents analysis of one campaign at one period of time. Also, it is expected that the nature of the destination affects people's responses to an advertising campaign. Therefore, future



research should seek to examine the salience and stability of these findings across settings.

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