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APPLICATION OF THE CONVERSION AND TRACKING MODELS IN MEASURING THE EFFECTIVENESS OF TRAVEL MICHIGAN'S 2003 TRAVEL ADVERTISING CAMPAIGN

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APPLICATION OF THE CONVERSION AND TRACKING MODELS IN MEASURING THE EFFECTIVENESS OF TRAVEL MICHIGAN'S 2003 TRAVEL ADVERTISING CAMPAIGN

By

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ABSTRACT

APPLICATION OF THE CONVERSION AND TRACKING MODELS IN MEASURING THE EFFECTIVENESS OF TRAVEL MICHIGAN'S 2003 TRAVEL ADVERTISING CAMPAIGN

By

Kudzayi Maumbe

This study's objective was to determine the effectiveness of the Travel Michigan's 2003 travel advertising campaign by application of the conversion and tracking models. Seven stages of data analysis were conducted in this study. The first stage was to determine whether significant differences existed in pre and post campaign advertising awareness. In the second stage, T-tests were conducted to identify significant differences in Destination Awareness (DA), Intention to Visit (IV) and Actual Visitation (AV) between those aware and those not aware of advertising. The third stage involved principal components analysis to reduce the captured 22 attitude variables into a more manageable data set that was used in subsequent analyses. In the fourth stage, correlation analysis was conducted to determine the correlation of the image components with Advertising Awareness (AA), Destination Awareness (DA) and Intention to Visit (IV). In the fifth stage, two models (Unaided Advertising Awareness (UAA) and Destination Awareness (DA)) were evaluated using logistic regression. In the sixth stage, the conversion model was applied to the data to calculate conversion ratios using cross-tabulations. Four different approaches named routes (0-3) were utilized to calculate the four alternative conversion measures. The routes were derived from the conversion and tracking models given by Siegel and Ziff-Levine (1990). Route zero was the direct route

only considering those visitors to the state who indicated their decision to visit was influenced by the advertisements without necessarily having gone through all the stages as depicted by the conversion and tracking models. Route one was from the tracking model, and it included the destination awareness stage, route two was also from the tracking model, but it excluded the destination awareness stage. Route three was from the conversion model which included all the stages plus the "inquiry-fulfillment" stage. Seventh, the conversion ratios from the preceding stage were utilized to calculate the return on advertising investment.

The results at each stage consistently show the effectiveness of Travel Michigan's advertising. Significant differences in advertising awareness were found between phases 1 and 2, implying the advertisements managed to gain the audience's attention. There were also significant differences in DA, IV and AV between those aware and those not aware. Results showed Michigan is viewed mainly as a family destination and as a close enough destination for short trips. Logistic regression results showed TV is the most important in increasing one's advertising awareness, followed by gender and experience. Experience is the most important in increasing one's destination awareness followed by Web-use, intention to visit and exposure to advertising. Results from the sixth and seventh stages of analysis show positive conversion ratios and ROI. Route zero yielded a 11.2% conversion ratio and a $10.47 ROI for every dollar spent on advertising; route one yielded a 5.2% conversion ratio and a $4.86 ROI for every dollar spent on advertising; route two resulted in a 8.5% conversion ratio and $7.94 ROI and finally route three yielded a 2.2% conversion ratio with $2.06 ROI for every dollar spent on advertising. Overall, Travel Michigan achieved a positive return on advertising investment.

DEDICATION

To my great parents Eliah and Emmah Chitiyo.

ACKNOWLEDGEMENTS

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KEY TO ABBREVIATIONS

AA:	Advertising Awareness
AV:	Actual Visitation
CR:	Conversion Rate
DA:	Destination Awareness
DMA:	Designated Marketing Area
IV:	Intention to Visit
MI:	Michigan
OCR:	Overall Conversion Rate
PDI:	Positive Distance Image
PEI:	Positive Entertainment Image
PFI:	Positive Family Image
ROI:	Return On Investment
TTRRC:	Travel, Tourism and Recreation Resource Center
UAA:	Unaided Advertising Awareness

Chapter 1

1.0 Introduction and Problem Statement

The economic importance of tourism to states, regions and the world has been well documented and can't be disputed. Within the United States alone, travel and tourism is a US$1.3 trillion industry, is the leading employer in states such as Florida and Hawaii and ranks among the top three employers in 29 of the 50 states (TIA 2005). Recognizing this economic importance of tourism to the economy, states have agencies that promote inbound tourism with budgets ranging from about $1.7m in Delaware to over $70m in Hawaii (TIA, 2003). With such big tourism budgets coupled with tight economic conditions, states' tourism agencies are faced with increasing pressure to justify their promotion budgets and be accountable for the planned impacts.

Conversion studies have been commonly used in most of the advertising effectiveness research. These studies, however, have been criticized for having methodological and design shortcomings that limit their usefulness and application (Messmer and Johnson, 1993). Some of these limitations include: overstating of the conversion ratio as a result of including those individuals who had already decided to visit before being exposed to advertisements, high non-response bias and inability to provide quantitative figures on return to advertising investment. Advertising tracking studies have also been frequently used to determine advertising effectiveness. Advertising tracking studies seek to generate awareness among the target audience, create awareness of the destination as a place to visit, create a positive image of the destination, motivate consumers to travel to the

destination and influence travel behavior (Siegel and Ziff-Levine, 1990). The advertising tracking model, like the conversion model, because it is most suitable for generating awareness and creating positive destination image, can't be expected to produce an all inclusive estimate of return on investment.

Many communication theories have been used as the basis for advertising research including the Hierarchy of Effects model (Palda, 1966) and the AIDA model: Attention, Interest, Desire and Action (Haley, 1985). The Hierarchy of Effects model constitutes six steps, namely Attention-Interest-Comprehension-Impact-Attitude and Sale. Howard and Sheth (1969) developed a theory of buyer behavior that supported the Hierarchy of Effects model of consumer behavior. In this model, Howard and Sheth (1969) employed the following five output variables: attention, brand comprehension, attitude, intention and purchase. Regardless of which model of communication and/or consumer behavior being referred to, the "attention" and 'interest/attitude' stages both always precede the action stage. This implies that getting the consumer's attention, generating interest and changing their otherwise negative, neutral or non-existent attitudes are prerequisites to getting to the action stage. Advertising effectiveness, therefore, can be measured in more ways than just counting the individuals that act. Research has shown that 76% of "definites," 31% of "probables" and 27% of "mights" actually purchase the advertised brand (Gruber, 1970).

The statement of the problem was to determine the effectiveness of travel advertising on

peoples' destination awareness, attitudes towards MI as a tourism destination, motivation (intention) to visit the state and actual visitation. The goal is to determine how effective the advertisements are in moving individuals from a state of 'not aware of MI as a tourist destination' to '**mights**,' '**probables**' and '**definites**.' The study also seeks to investigate and analyze the relationship between a number of different variables including advertising awareness, destination awareness, attitude, intention to visit and other demographic variables such as income and education, to mention a few. While this study uses the same kind of procedure as in the conversion and tracking studies, it goes beyond just determining the effectiveness of advertising. It also investigates the relationship of different important variables as they pertain to advertising and destination awareness. The following two main dependent variables will be evaluated in this study:

- Advertising Awareness (AA)
- Destination Awareness (DA

Several predictor variables will be used including;

- Exposure to advertisements
- Experience with leisure travel in the state
- Advertising channel
- Income
- Gender
- Web use, searching for travel information
- Toll-free phone inquiry
- Distance of DMA from Michigan
- Attitude towards or Image/Perception of Michigan as a tourist destination

1.1

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1.1 Objectives

The objectives of this study are to:

1. Determine consumer awareness of Travel Michigan's advertising.
2. Establish whether or not Travel Michigan's advertising program is effective in generating destination awareness.
3. Determine advertising effectiveness in changing consumers' attitudes of Michigan as a tourism destination.
4. Analyze the relationship between annual income, location of DMA and advertising awareness (AA), destination awareness (DA) and intention to visit (IV) the state of Michigan.
5. Determine advertising effectiveness of the Travel Michigan's 2003 advertising campaign by computing conversion ratios for the three targeted DMAs including Chicago, Cleveland and Indianapolis.
6. Calculate the return to advertising investment (ROI) for Travel Michigan' s 2003 travel advertising campaign.

1.2 Hypotheses

The following hypotheses were addressed in this study:

1. **Individuals exposed to Travel Michigan's advertising will have greater awareness of the state as a tourism destination than those who have not been exposed.**

   Creating awareness is the first in a series of stages through which advertising works to change people's behaviors according to the Hierarchy of Effects Model of communication. Advertising first creates awareness, develops knowledge about the product, generates a liking and preference for the product leading to one's conviction to purchase the product resulting in the actual purchase of the product (Lavidge and Steiner, 1961). Simply raising top-of-mind awareness of a brand enables it to be evoked into more choice sets, thus increasing the probability of it being selected (Nedungadi, 1990).

2. **Travel Michigan's advertising will change people's attitudes towards the state as a tourism destination.**

   Advertising theory represents advertising as indirectly influencing behavior through its more direct effect on consumer attitudes (Butterfield et. al., 1998)

3. **Those individuals aware of Travel Michigan's advertising will have greater motivation/intention to visit the state on a leisure trip, than those who are not aware.**

   Development of motivation/intention to purchase is considered one of the intermediate results of advertising. After being exposed to advertising individuals develop motivation to purchase before they exhibit some conversion behavior

(Siegel and Ziff-Levine, 1990). Intentions are valid predictors of one's consumption of a brand (Wansik and Ray, 2000).

4. **Travel Michigan's advertising is effective in generating visits to the state.**

   Advertising is understood to have an effect on people's behavior or actions through a hierarchical process which involves getting people's attention, generating their interest and desire resulting in some action (AIDA) (Sandage and Fryburger, 1963). In this case, the action is taking a pleasure trip to the state of Michigan.

5. **Attitudes towards Michigan as a tourism destination will be positively correlated to Advertising Awareness (AA), Destination Awareness (DA) and Intention to Visit the state (IV).**

   According to the Hovland, Janis and Kelly (H-J-K) (1953) communication persuasion model, audience factors such as attitudes, self esteem, intelligence and others play an important role in effective persuasion communication and affect the way by which the stimuli (message) is perceived and received (Tan, 1985). Attitude and belief changes are a prerequisite to and precede sales, and there exists a positive relationship between changes in recall and attitudes (Haskins, 1964).

6. **Distance of a DMA from Michigan will be negatively correlated with AA, DA, and IV.**

   Travel behavior has changed. People are now taking more short getaways today than they did ten years ago (TIA, 2003).

7. **Annual household income will be positively correlated with AA, DA, and IV.**

   Resources are not used to develop judgments, beliefs or plans of action unless some motive exists (Feldman and Lynch, 1988). Because low income people have no financial resources to take pleasure trips, it is assumed that they have no motivation to pay attention to travel advertising hence, have no intention to take pleasure trips.

8. **Having taken a pleasure trip to Michigan before (Experience) will have a positive effect on advertising awareness.**

   This hypothesis is based on the selective processes or cognitive dissonance theory which states that individuals selectively attend to messages in an effort to reduce dissonance. Post purchase doubts about the wisdom of choosing a product could lead one to attend to that product's advertising in order to allay such doubts (Rotzol, 1964). Ehrenberg (2000) concluded that advertising's role is to reinforce feelings of satisfaction with brands already bought.

9. **Advertising channel has a significant effect on advertising awareness.**

   The way a message is conveyed to an audience (pictorially or verbally) has been argued to have a significant effect on the processing of the information contained in the advertisement. These processing differences have been seen to have an effect on the audiences' attitudes towards the brand and purchase intentions. Pictorial advertising stimuli can yield different results from verbal advertising stimuli, and pictorial stimuli generally are better recalled (Edel and Staelin, 1983).

Chapter 2

2.0 Literature Review

This chapter covers the literature review on the subject of advertising effectiveness. The theoretical background is given first, which includes a detailed discussion on persuasion, selective processes, and communication theories. The chapter is concluded by a discussion on research methods utilized in previous advertising effectiveness studies.

2.1 Theoretical Background

2.1.1 Persuasion Theories

The subject of advertising awareness is closely linked and studied using communication and persuasion theories. Many theories have been developed over the years to try to explain the behavior of humans when they receive messages during the communication process. Since one of the purposes of advertising is to persuade and convince the audience to buy the product, persuasion theories become important in advertising studies. Hovland, Janis and Kelly (H-J-K) (1953) developed an instrumental theory of communication and persuasion that defines persuasive communication as the process by which an individual (the communicator) transmits stimuli to modify the behavior of other individuals (the audience). Persuasive communication leads to attitude change through changing related opinions. Opinions, according to Hovland et. al. (1953), can be changed by exposure to persuasive communication that contains information and arguments why a new opinion should be accepted. Bayou, Mohamed, Panitz and Eric (1993) defined persuasion as a communication strategy designed to satisfy the parties involved by

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influencing attitudes and beliefs therefore behavior, which is what marketers hope to achieve through their advertisements. The instrumental theory of communication and persuasion as illustrated in Figure 1 divides the communication and persuasion process into three sections namely stimuli, intervening process and response.

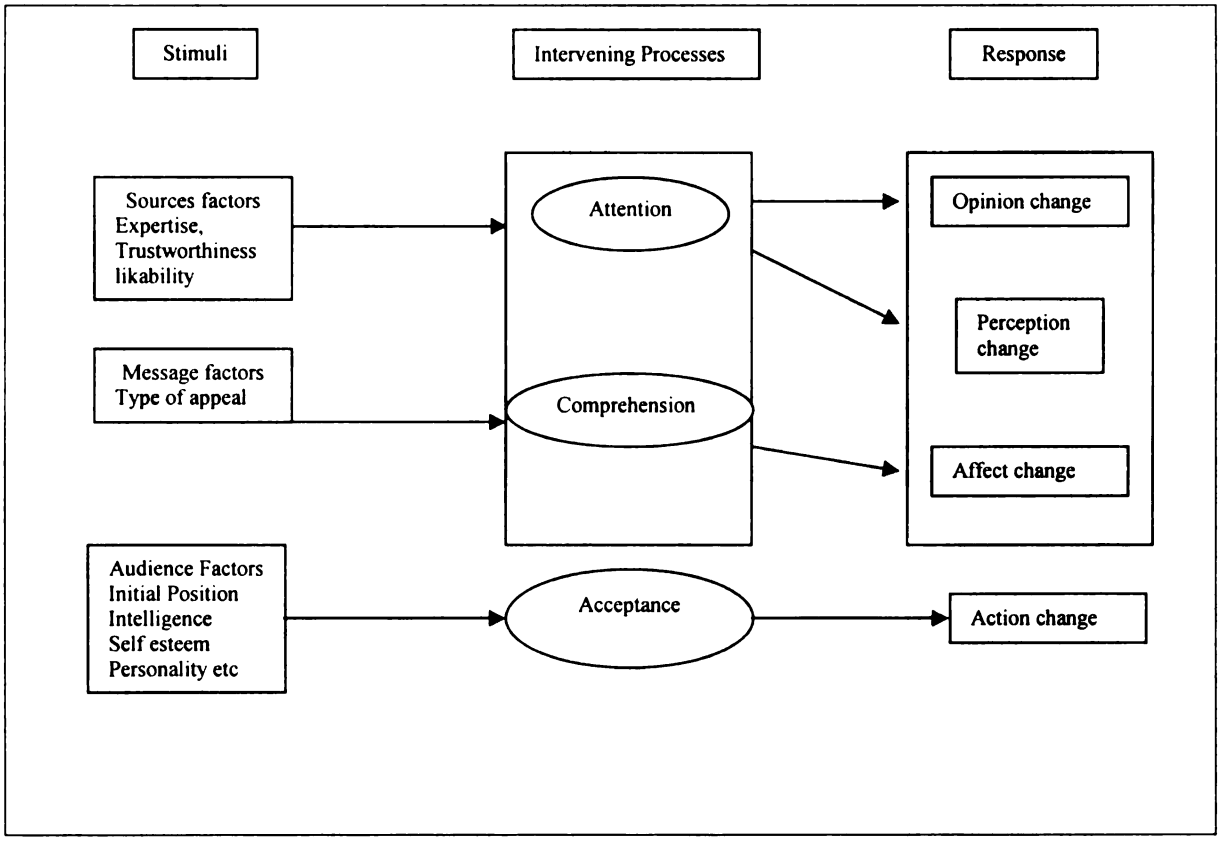

Figure 1: : H-J-K Instrumental theory of communication and persuasion model (Tan, 1985)

This theory has several important aspects relating to this study. First, according to the H-J-K theory, communication success is not only measured in action change, but also in opinion, perception and affect change. Since, one of the objectives of this study is to determine the effectiveness of specific advertisements in changing people's attitudes towards Michigan as a tourist destination, according to this theory, the advert is said to be effective if it results in a significant positive change in people's attitudes and perceptions

towards Michigan as a vacation destination. Second, this theory includes attention as a stage of the intervening processes. Advertising awareness, a variable also being measured in this study, does not occur without the target audience paying some attention to the advertisement. Third, the theory places importance on the effect of audience factors such as initial position, intelligence, personality and self-esteem on the results. This supports the hypothesis that individuals who have visited Michigan before, because of their knowledge and experience, will have more positive attitudes towards Michigan, as well as greater awareness of Michigan advertising.

The H-J-K theory also forms the basis for hypotheses 2 and 3 which state that: 1) individuals will rank Michigan higher as a tourist destination after exposure to advertising and: 2) that individuals who are more aware of the advertisements have greater motivation to visit Michigan. The H-J-K theory of persuasive communication helps us understand why individuals change or don't change their attitudes and/or actions when exposed to an advertisement. This theory is important, especially considering that this study involves some measure of the effectiveness of advertising by comparing variations in some important variables before and after exposure to advertisements. However, the H-J-K theory of persuasive communication, like the other learning and belief-based theories of persuasion, is based on the notion that persuasion depends on the extent to which message recipients learn from, form beliefs about, as well as retain the ideas conveyed by the message (Hovland, Janis and Kelly, 1953).

The information-processing perspective, which includes the cognitive-response model, directly criticize learning belief-based theories such as the H-J-K theory (Meyers- Levy and Malaviya, 1999). The Cognitive-Response Model of persuasion states that persuasion occurs as a result of people's reflections on, as well as cognitive responses to, the contents of a message (Wright, 1980). Cognitive responses are defined as the thoughts that arise during the process of elaboration when people relate the contents of the message to other messages or to their pre-existing knowledge and views stored in memory. Persuasion in this case is a reflection of the net favorableness of the cognitive responses that are evoked in people's minds as they elaborate on the message, and a decision is based also on the net favorableness of the information available in memory at the time of judgment (Kisielius and Sternthal, 1986; Keller, 1987; Meyer-Levy and Malaviya, 1999; Weilbacher, 2002). Cognitive-response theory, however, has been criticized mainly for its failure to explain situations in which people are persuaded even when there exists enough evidence to show that they did not elaborate on the contents of the message.

Dual process persuasion models were prompted by the failure of the cognitive-response models to address those situations in which individuals are persuaded even though they don't seem to have elaborated much on the contents of the message. The dual process models such as the Elaboration Likelihood Model (ELM) of persuasion suggest the existence of a systematic (central) and a heuristic (peripheral) route to persuasion (Petty and Cacioppo, 1986). The systematic route produces judgments that are based on critical and extensive elaboration of messages while the heuristic route produces judgments that

are based on simple and intuitive inferences involving scanty elaboration (Meyers-Levy and Malaviya, 1999). Which of these two routes mediates persuasion at any given time is affected by a number of factors influencing the amount of cognitive resources that an individual devotes to the message elaborative process. These factors include, but are not limited to, available time, message relevance, experience and prior knowledge. That experience and prior knowledge affect persuasion becomes important to this study when it comes to the differences in advertising awareness, destination awareness and attitude towards Michigan among those individuals that have visited the state and those that haven't. It is also important in understanding the differences among those who have been exposed to the advertisements more as compared to those who have been exposed less. Individuals with prior knowledge and/or more experience with the state are likely to be more aware of the state's advertising than those that have neither the experience nor prior knowledge.

Another theory, the **experiential** based theory of persuasion, has been suggested as a third and alternative basis for judgment and persuasion. This theory, unlike the systematic and the heuristic approaches which emphasize the cognitive process of persuasion, states that judgments are mediated by the sensations and/or feelings that are triggered by the act of engaging in an elaboration process, (Strack, 1992). Meyers-levy and Malaviya (1999) developed an integrative framework of advertising persuasion shown in Figure 2 that incorporates all the other theories and goes even further to include a judgment correction phase during which individuals reconsider their decisions and make adjustments in an effort to eliminate biases that might have occurred in the initial elaboration process. This

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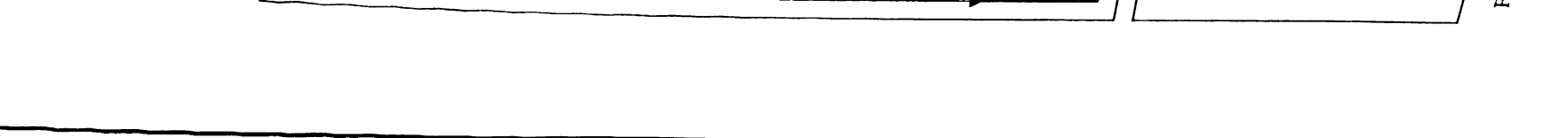
framework was developed as a result of the earlier theories' failure to explain situations in which individuals change their decisions after having been persuaded and convinced otherwise. This theory highlights to marketers the importance of continual advertising to remind customers of products and services because even if they are initially persuaded, customers always change their judgments and decisions with the passage of time. The integrative framework shown in Figure 2 is divided into two main stages: judgment formation and judgment correction.



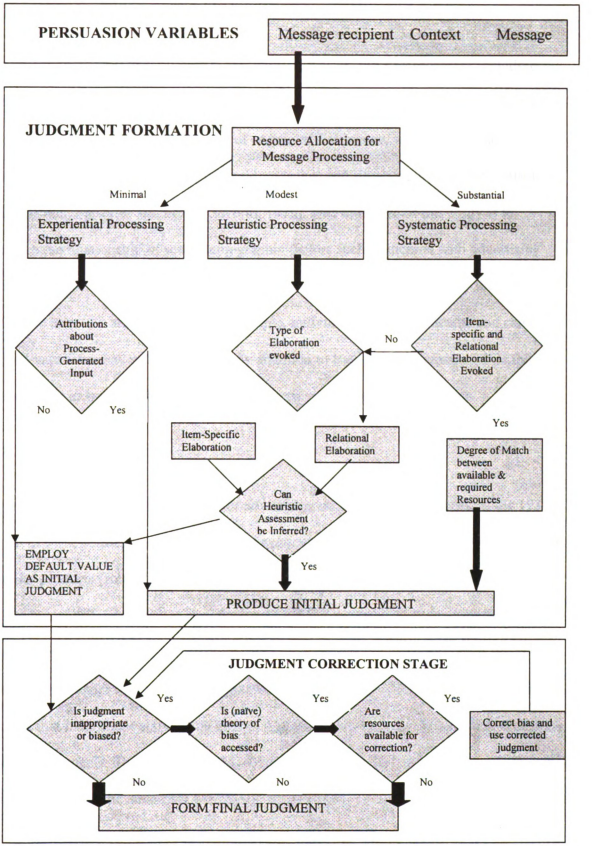


Figure 2: An Integrative Framework of Advertising Persuasion (Meyers-Levy and Malaviya, 1999)

2.1.2 Selective Processes Theories (Cognitive Dissonance Theory)

Another important theory relating to this study is that of selective processes including selective attention, selective perception and selective retention (Haley, 1985). This theory agrees with Festinger's (1957) theory of cognitive dissonance, which states that individuals deliberately attend to or avoid messages and situations that do not conform to their beliefs, lifestyles and needs (Severin, 1979). One objective of this study is to analyze the relationship of some demographic factors such as income with advertising and destination awareness. Some of the variation here may be explained by the theory of selective attention and retention. For example, individuals with low income and can not afford vacations may not necessarily pay attention to travel advertisements while those with higher income would be more likely to tune into travel advertisements.

2.1.3 Communication theories

Studies to evaluate the effectiveness of advertising on sales date as far back as the 1930s. Most of these studies focused on consumer products, generally single or a small group of similar products (Butterfield et al., 1998). Advertising has been known to affect people in a number of different ways as hypothesized by different researchers over the years. The earlier black box theories of consumer behavior were some of the first ones to try to explain the impact of advertising on peoples' behavior. These models were based on the notion that individuals show some kind of response when exposed to a set of stimuli such as advertisements. They also assumed advertising operates in a straight-forward one way manner in which the advertiser decides on the message, encodes it and delivers it through mass media to a basically passive or receptive audience (Haley, 1985).

One of the popular earlier models is the AIDA (attention, interest, desire, action) model, which assumes that when individuals are exposed to advertising communication, they go through a series of stages namely Attention, Interest, Desire, and Action. Accordingly, the purpose of advertising therefore is to catch people's attention, leading them to develop some interest and desire in the product resulting in some action (purchase of product) (Haley, 1985). The Hierarchy of Effects model was developed as an upgrade of the AIDA model. It is a straight forward model consisting of six stages namely Attention, Interest, Comprehension, Impact, Attitude and Sale (Lavidge and Steiner, 1961). The main weakness of these straight-forward models lies in their failure to account for situations in which these steps are skipped and/or reversed as evidence has shown that frequently occurs (Ray, 1973; Aaker and Day, 1974).

New models were developed which sought to address the weakneses of the previous models. The new models, such as the Richardson-Haley model (1980), have their roots in the two-way communication process first suggested by Bauer (1964) based on the understanding that consumers are not inert passive targets for messages that can be manipulated by advertisements. According to Bauer (1964), message recipients are active participants in the communication process, screening, distorting, adding and subtracting contents of the messages that they are being exposed to. This theory agrees with the selective processes theories that, when individuals are exposed to a message including advertising, they receive what they want to receive and believe what they want to believe (Haley, 1985). The Richardson-Haley model emphasizes that the message recipients when exposed to advertising are not in a blank state, but bring their own experiences,

values, interests, personality, lifestyle, moods and habits. This is especially important to advertisers because it highlights advertising has different effects on different people and audiences, there really isn't a 'one size fit all' approach when it comes to advertising. This theory is also important in relation to this study as it makes it worthwhile to investigate the importance of each of the different individual characteristics such as attitude and prior knowledge to advertising effectiveness.

Recent theories of how advertising works have their roots in two-way models of communication based on the belief consumers are not inert, passive recipients of advertising. What's important when individuals make decisions is not the last advert they were exposed to, but also what is remembered from previous advertising, past experience, and a lot of other information about the brand that the customer holds from other non-advertising communications out of the marketer's control (Weilbacher, 2003). According to Weilbacher (2003), the human brain is complex enough to process a wide variety of incoming information, and, at any given moment, an individual perceives a limited amount of information that has been selected by the brain from all the incoming information from the external environment. Exactly what an individual perceives depends on what the mind remembers from the past, as well as the relevance of this information. Weilbacher's argument is in line with the theories of selective processes in that individuals choose what they do or do not attend to. These new developments in communication theory make advertising an even more complicated task for marketers. Marketers will find it more challenging to reach their customers, especially considering today's consumer is bombarded with thousands of advertisements per day.

2.2 Does Advertising Really Work?

A lot of studies have been conducted on advertising effectiveness using different methodologies. Most studies have been focused on consumer goods in general rather than on tourism and or destination marketing. The questions that most advertising and/or marketing departments and agencies have to answer are; does their expenditure on advertising result in more sales or in increased visits in case of tourism? Does an increase in the advertising budget, or an increase in the frequency and size of advertisements, result in more sales or visits? Responding to these questions has become even more important for government agencies that rely on public funds for their advertising budgets in these times of budget crunches.

Simon and Arndt (1980) in their study on the shape of the advertising response function, concluded that there are no increasing returns to advertising and that diminishing returns characterize the shape of the advertising response function. Their study involved a review of over a hundred studies examining advertising effectiveness. The advertising response function they used referred to the quantitative relationship between advertising inputs such as monetary expenditure, size and frequency of advertisements and outputs such as sales, ad recall, attitudes and intention to buy. They proposed the advertising response function is a concave-downward function. In the concave function, there are diminishing returns based mainly in the micro-economic law of diminishing returns. Their argument for the concave shape is that, for an individual consumer, a given message conveys less and less information with each additional exposure. This finding

agrees with Krugman's (1972) argument for the need for two or three exposures. He states the first exposure creates curiosity, the second one brings recognition and the third one clinches a decision while any extra ones have little value. This led to the theory that there are decreasing returns to frequency of advertising. In the S-shaped function, however, there are increasing returns first and then diminishing returns after an inflexion point is reached. Other researchers such as Chamberlin (1962) and Rao (1970) advocate for the S-shaped advertising response function. Their arguments for the S-shaped response function are based on the notion there exists a threshold effect. In support of the S-shaped advertising function, Chamberlin (1962) argued a consumer's consciousness has to be gained first, and, while it is being gained, additional expenditure in advertising yields increasing returns.

While both these functions show there are some returns to advertising, they are more related to consumer products, and their applicability to tourism advertising is not clear. Tourism is unique in that once a person has visited a destination, especially long haul destinations, they are not likely to visit the same place again, since long haul travel is typically not a repeat visit to a familiar location, but an exploration of new and unfamiliar parts of the world and experiences (Tourism New Zealand, 2005). Additional advertising in this case might not result in any positive effects. With consumer goods, however, when consumers are impressed after the first purchase, they are likely to include that product on their short list of preferred brands and are also more likely to repurchase the same brand or product the next time they need it or if they run out of it (Wansink and Ray,

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2000). In this case, repetitive exposure to advertising might serve a purpose of reminding the consumer of the brand.

Advertising has been found to affect market share and firm sales in particular industries including the beer and cigarette industries (Palda, 1964; Peles, 1971). Barry and O'Hagan (1972) used log linear models to examine the effect of advertising and other variables such as income and price on the number of visits and expenditures by British tourists in Ireland. The advertising variable was found to be significant, implying advertising had an effect. Other studies such as the one by Uysal and Crompton (1984) have also shown the effectiveness of increased promotional expenditures on tourist arrivals and expenditures.

Ehrenberg (2000), however, does not support this assumed power of advertising, but rather argues advertising's role is mainly to reinforce feelings of satisfaction with brands already bought. This argument is consistent with the theory of cognitive dissonance which states that individuals selectively attend to advertisements of products they have already purchased in search of information that reassures them that they made the best decision hence reduce post-purchase dissonance. Ehrenberg (2000) argues advertising, though effective, is not as powerful as often thought and that there is no evidence that it works by any strong form of persuasion or manipulation. According to Ehrenberg (2000), advertising works in an Awareness-Trial-Reinforcement (ATR) sequence. Consumers first gain awareness and then they make a trial purchase and finally a repeat buying habit may develop and be reinforced if the consumer is satisfied with the product. Even though advertising has a role in each stage of the purchase decision process, he argues repeat

buying is the main determinant of sales volume and advertising's role is to reinforce rather than persuade. Ehrenberg also criticizes the traditional Awareness-Attitude-Behavior thinking of how advertising works. He argues peoples' attitudes can't be readily changed, and even if they change, there is no evidence to support that attitude change precedes desired purchase behavior. These arguments contrast with other researchers who have found attitude change is an intermediate measure of advertising effectiveness and predictor of end behavior (Lavidge and Steiner, 1961; Fishbein and Ajzen, 1975; Tan, 1985; Butterfield, Deal and Kubursi, 1998, Wansik and Ray, 2000).

Other researchers (Schmalensee, 1972; Comanor and Wilson , 1974) joined Ehrenberg (2000) in expressing their skepticism about the effectiveness of advertising. They argue the strong correlation between advertising and sales could be a result of the effects of sales on advertising rather than advertising on sales as widely believed. Both Schmalensee (1972) and Comanor and Wilson (1974) conducted studies using simultaneous equations in which they included both effects, and they found no conclusive evidence that supported advertising had an effect on sales.

Whether or not advertising is effective depends on one's objectives. The important point to note is that it is vital that one considers the initial goal of running an advert when evaluating whether it has been effective or not. This not only ensures that the right conclusions are drawn, but it also enables accurate selection of proper methods to use in evaluating the effectiveness of the advert. For example, it is not fair to evaluate the effectiveness of an advert meant only to generate awareness on the basis of increased

sales or visits. The advert might not have resulted in increased sales but might have generated awareness of the product, brand or destination. In this case, if an appropriate method to measure change in awareness is not utilized, then the advert might be considered ineffective. Lavidge and Steiner (1961) gave examples as shown in Table 1 of appropriate research approaches to evaluate different kinds of advertising goals.

Table 1: Advertising, Related Behavioral Dimensions and Advertising Research related to the Model

Related Behavioral Dimensions	Movement Toward Purchase	Examples of types of promotion/advertising relevant to various steps	Examples of research approaches related to steps of greatest applicability
	Purchase	Point of purchase	Market or sales tests
CONATIVE		Retail store advertisements	Split run tests
-the realm of motives		Deals	Intention to purchase
Advertisements		'Last chance' offers	Projective techniques
stimulate or direct sales		Price appeals	
	Conviction	Testimonials	
	Preference		Rank order of preference for brands
		Competitive	
AFFECTIVE		advertisements	Rating scales
-the realm of emotions.		Argumentative copy	Image measurements
Advertisements change			including check
attitudes and feelings		Image advertisements	lists and semantic
		Status, glamour appeals	differentials
	Liking		Projective techniques
	Knowledge	Announcements	Information questions
COGNITIVE		Descriptive copy	Play-back analyses
-the realm of thoughts		Classified advertisements	Brand awareness surveys
Advertisements provide		Slogans, Jingles	Aided recall
information and facts		Sky writing	
	Awareness	Teaser campaigns	

Lavidge and Steiner (1961)

According to the above model, there are different methods that can be used to evaluate the effectiveness of advertisements depending on the goal. For example, to create

awareness of a product, an advertiser can run a descriptive advert and then evaluate its effectiveness through aided recall research. It is, therefore, not appropriate to conduct market or sales tests meant to evaluate point of sale advertisements to determine the effectiveness of a descriptive advert whose objective was to create awareness. Each stage, according to Lavidge and Steiner, is important and relevant as it is supposed to progressively lead to the final point which is 'purchase.' It is important, therefore, to clearly state the objectives of advertising as well as to identify a suitable method to evaluate the effectiveness of the campaign prior to launching the advertising campaign. Doing so not only simplifies the evaluation process but also insures that the right conclusions concerning the campaign are drawn.

2.2 Travel Advertising Effectiveness Methods Review

Many studies have been conducted on advertising effectiveness in general. However, not many have been conducted that deal specifically with travel advertising. Several methods have been utilized by different researchers to determine the effectiveness of travel advertising, not without limitations, however. Conversion and tracking studies have been the most popular approaches that have been used to determine the effectiveness of travel advertising (Woodside and Reid, 1974; Ballman et. al., 1984; Butterfield et. al.,1998; Zhou, 2000).

Advertising is meant to achieve a wide range of different goals including but not limited to: creating awareness, reminding, changing attitudes and increasing sales and/or visits. Different methods and approaches can be utilized in addition to the tracking and

conversion models to determine if travel advertising is effective. The advertising tracking model evaluates advertising effectiveness through a series of stages from exposure to advertising to conversion behavior. The advertising tracking model assumes consumers may be converted by advertising solely on the basis of awareness and image building. The conversion model on the other hand, measures advertising effectiveness through a 'funnel' process through which consumers are assumed to go from exposure to the final goal of conversion. The conversion model process is linear, sequential,l and the group of consumers gets smaller as they get closer to conversion.

Even though conversion and tracking studies have been the popular methods of evaluating travel advertising effectiveness, they have been criticized for a number of reasons. First, conversion models do not provide a quantitative figure on return on travel advertising investment (ROI). They can provide diagnostic information to decision makers. Therefore, the use of conversion models to produce an estimate of ROI is both misleading and misguided (Burke and Gitelson, 1990). Second, conversion studies suffer from non-response bias, especially in mail studies (Woodside and Ronkainen, 1984; Ballman et. al., 1987). Third, the conversion model puts emphasis on inquiry fulfillment. According to the conversion model, inquiry is a necessary step in selling a destination and must occur prior to visitation (Siegel and Ziff-Levine, 1990). The model, therefore, assumes all visitors exposed to travel advertising must inquire for travel information before visiting. This is a major shortcoming of the model for which it has been criticized because not all advertising driven visitors inquire before visiting (Siegel and Ziff-Levine, 1990). Also, by making inquiry a requirement, the model underestimates the effects of

advertising. By making inquiry a necessary step, the conversion model also downplays the effects of advertising on creating destination awareness and creating positive destination image, the two stages that precede the inquiry fulfillment stage in the model. This model, therefore, is most useful in cases where the study's objective is to measure the effect of travel advertising in generating inquiries and to provide diagnostic information on advertising effectiveness.

The tracking model on the other hand does not require all advertising generated visitors fulfill the inquiry requirement. The tracking model assumes that advertising generated visitations do not depend on inquiry fulfillment. Visitors may or may not inquire before visitation. The belief is that consumers can be converted by advertising as a result of awareness and positive image (Siegel and Ziff-Levine, 1990). However, the tracking model is also not suitable when an ROI estimate is sought. The tracking model is suitable when the goal is to measure the effect of advertising on; generating advertising awareness, generating destination awareness, creating positive image, motivating consumers to visit the destination and influencing travel behavior (Siegel and Ziff-Levine, 1990).

Linkage advertising has been suggested as one of the most effective when it comes to measuring the effects of advertising on sales. Linkage advertising makes it easy to evaluate the effects of advertising on sales because it links the up-front advertising to the sale (Rapp and Collins, 1987). Rapp and Collins (1987) argued too often advertising leaves the prospective consumer dangling without any idea what to do next, where to buy

or how to obtain additional information. Therefore, marketers should seek to bridge this gap between advertising and sale by providing more information through linkage advertising. While linkage advertising might work well for other industries its applicability to tourism and destination marketing is complicated. State and provincial destination marketers' hands are tied because, as much as they are well aware of the main attractions in their regions, they are often forbidden to mention them due to political restrictions on highlighting individual cities and attractions. State tourism agencies, therefore, in their efforts to lure visitors find their advertising ludicrously vague about 'why' (Garfield, 1994).

As much as linkage advertising is important in bridging the gap between advertising and purchase and is certainly suitable for evaluating the effect of advertising on sales, it has a shortcoming in that it fails to establish causal relationships between advertising and purchase (Woodside, Trappey and Macdonald, 1997). To address this problem, the use of true experiments is recommended. For an experiment to be considered true, it has to meet certain criteria including, presence of a control group and random assignment of subjects to the control and experimental groups (Trochim, 2001). Other researchers, such,as Raymond (1974), Caples (1974) and Woodside (1990), have advocated for the use of true experiments to determine the causal relationship between advertising and sales. The use of experiments to determine travel advertising effectiveness is, however, not very practical and is further complicated by the expenses associated with meeting the requirements of true experiments (Messmer and Johnson, 1993; Woodside et al., 1997).

Quasi-experiments have been used as an alternative to true experiments. Quasi-experiments are tests of the effects of changing levels of outcome variables caused by treatment variables when random assignment has not been used to create equivalent comparison groups (Woodside et al., 1997). Woodside et. al. (1997) used a quasi-experiment to measure the effectiveness of linkage destination advertising on tourist behavior and expenditures at Prince Edward Island, Canada. They chose the post-test only non-equivalent groups design with higher order interactions to determine with higher accuracy the cause-effect relationship between the advertisements (printed visitors guide) and the outcome behavior (expenditure). The results of their study showed linkage advertising had an indirect effect on expenditures through participation in more activities at the destination. Those individuals who had acquired the guide participated in more activities and spent more than those who had not acquired the guide. Use of the higher order interactions made it possible to establish the cause-effect interpretation. The results showed individuals with knowledge and experience participated in more activities at the destination.

Regardless of the type of method utilized it is important to note all approaches have weaknesses and/or limitations. The problem with the supposedly better and more accurate methods is that their applicability to the travel and tourism field is complicated and costly to apply. It is, therefore, of particular importance that the objective of the campaign be clearly stated before initiating an assessment of advertisements so that an appropriate evaluation method can be employed. It is important also to recognize there is no single faultless method to evaluate advertising effectiveness.

Chapter 3

3.0 Methods

This chapter discusses the methods that were used in this study. The study design is discussed first, then the data collection methods. A discussion on the techniques of data analysis concludes the chapter.

3.1 Study Design

The study was a pre and post-test with no control group as depicted below:

$$R \quad O_1 \quad X \quad O_2$$

Where: R = Random selection of subjects

O_1 = Observation 1 (phase 1)

O_2 = Observation 2 (phase 2)

X = Treatment (exposure to advertisements)

The study was cross-sectional not panel, implying two different groups of respondents were randomly sampled in each wave. Since the study was measuring awareness a panel study would have been inappropriate, as the subjects would become sensitized.

3.2 Data collection

Data for this study were collected through telephone interviews in 2003 from three Designated Marketing Areas (DMAs) including Chicago, Cleveland, and Indianapolis. The sampling frame included all residents of the three DMAs with a land-line telephone. The respondents' phone numbers, which in this case also represented the study sample,

were purchased from Survey Sampling International, Inc. which drew random-digit-dial phone samples from the three DMAs. The data were collected in two waves. The first (pre-campaign) wave was conducted between April 8 and May 1, 2003 and the second (post-campaign) wave was conducted between July 7 and July 26 for Cleveland, between July 27 and August 26 for Indianapolis and between July 27 and September 2 for Chicago.

The first wave was conducted simultaneously in the three DMAs, but the second wave was conducted at different times in each DMA depending on the time the advertisements were placed in the media. Even though the initial target of 1,800 completed surveys (300 per DMA per wave) was not reached, a total of 1,117 surveys were completed, enough to conduct reasonable analysis. The 900 target in the first wave was not reached mainly due to administrative reasons. The final contract was agreed upon and signed too late to have allowed more pre-campaign surveys to be completed. The time between the beginning of the survey and the launching of the campaigns in the three DMAs was not long enough to allow more surveys to be completed. However, the complete second wave target of 900 was met.

The survey instrument was a questionnaire consisting of 37 questions that were identical across the three DMAs except for the questions that identified and described the different specific advertisements that were run in each DMA (refer to Appendix 1 for the full questionnaire). A complete interview lasted approximately 10 minutes and there were no incentives offered to the respondents for participating in the study.

Three different communication channels were utilized for the 2003 travel advertising campaign including Television, radio and magazine. The specific content of the advertisements varied among the three DMAs and the channel of communication. Appendix 3 gives a detailed description of the advertisements by channel and DMA.

Advertising Awareness was measured at two levels by measuring unaided and aided recall of Michigan advertising. For unaided awareness respondents were asked to name the states for which they recalled seeing or hearing any vacation or travel advertising within the past six months. The following question was asked to prompt unaided recall, 'For which states or provinces do you recall seeing or hearing any vacation or travel advertising in the past six months?' If the respondent mentioned seeing or hearing any Michigan advertising, they were then asked to describe in general what the advertising said and what message they thought it was conveying. A nominal measure was used to measure unaided recall coded as; 1 if they recalled seeing or hearing Michigan advertising and 0 if not. To measure 'aided recall' the interviewer would describe a specific advert and then ask whether or not the respondent recalled seeing or hearing that particular advert in the past six months. The following question was asked to prompt unaided recall, ' Do you recall seeing or hearing any vacation or travel advertising for...in the past six months?' respondents were also asked to state whether or not they had heard and/or seen specific television, radio and magazine advertisements that the interviewer read and described for them. A nominal scale was also used to measure aided recall coded as; 1 if they recalled seeing or hearing Michigan advertising and 0 if not.

Destination Awareness was also measured nominally, 1 if Michigan was mentioned as one of the states that come to mind when thinking of taking a pleasure trip and 0 if not. The following two questions were asked to determine respondents' awareness of Michigan as a tourism destination;

1. 'When you are thinking of taking a pleasure trip in the U.S. or Canada what cities, states or provinces come to mind?'
2. 'Now thinking just about a pleasure trip in the Mid-west what cities or states come to mind?

There were several other variables that were measured at different levels using different scales as shown in Table 2.

Table 2: Variables measured and their levels of measurement

Variable	Dependent/ Independent	Level of measurement	Scale
Advertising Awareness (AA)	Dependent	Nominal: measured by aided and unaided awareness	1=aware; 0=not
Destination Awareness (DA)	Dependent	Nominal: measured by whether or not MI comes into mind when thinking of taking a pleasure trip	1=aware; 0=not
Attitude towards MI as a tourism destination	Independent & Dependent	Ordinal: measured by ranking MI on a set of given attributes	1=Disagree completely 5=Agree completely
Exposure to advertising	Independent	Ratio: measured by the number of times one has seen or heard MI advertising	0=none 1+ otherwise
Intention to Visit the state (IV)	Independent & dependent	Ordinal: Whether or not one intends to visit the state on a leisure trip in the next 12 months	1= will definitely visit 5= most unlikely visit
Experience	Independent	Nominal: Whether or not one has visited MI on a pleasure trip before	0=none 1=yes
Advertising Channel	Independent	Nominal: measured by whether or not a respondent recalls seeing or hearing MI advertisements through any of the channels including TV, Radio and Magazine	1=aware of ad through that specific channel 0=not
Inquiry	Independent	Nominal: Whether or not one used the state's toll free phone line to inquire about travel information	0= yes 1= yes
Web use	Independent	Nominal: Whether or not one has visited the state's official tourism web site in the past 12 months	0= no 1= yes
Income	Independent	Ordinal: measured in three groups	0= < or = $42K 1= $42k-$75K 2= over $75K
Gender	Independent	Nominal	1=male 2=female
Location of DMA	Independent	Ordinal	1=Clev; 2=Chic; 3=Indy

3.3 Data analysis techniques used

Data analysis was conducted in stages to fully address each hypothesis and meet the objectives of the study. The first stage of data analysis included descriptive analysis where the general characteristics of the data were described. Demographic information for respondents was presented in tables and charts at this stage.

The second stage of analysis included some pre and post advertisement (phases 1 and 2) comparisons to determine if there were any significant differences in advertising awareness before and after exposure to advertising. The Mann-Whitney U test was employed at this stage to detect any significant differences in advertising awareness between phases 1 and 2. The Mann-Whitney U test was used as it is more appropriate for nominal variables than the T-test. This was an important step in the analysis because it was the first test of the effectiveness of the advertising campaign. If no significant differences were found in advertising awareness before and after exposure, then any further analysis would not be meaningful. This step, therefore, determined if Travel Michigan's travel advertising was successful in breaking through all the clutter and getting the audience's attention.

The third stage of analysis included testing the effectiveness of Travel Michigan's advertising on; creating destination awareness, improving people's attitude towards Michigan as a tourism destination, creating some motivation and intention to visit the state, and increasing visitation to the state. A T-test was employed in this stage of analysis. After having managed to capture the audience's attention, this stage of analysis

sought to determine if there were any significant differences in the above mentioned variables between those aware and those not aware of advertising.

Next, factor analysis was conducted to reduce the 22 attitude towards Mi as a tourism destination factors to a smaller more manageable set to be used in subsequent analyses. Principal components analysis instead of common factor analysis was used as the extraction method because the focus was on both data reduction and total variance not just common variance.

The next stage of analysis involved correlation analysis to determine the kind of relationship between attitudes towards Michigan as a tourism destination, distance of the DMA from Michigan, annual income and advertising awareness, destination awareness and intention to visit the state. The Spearman's rho correlation test was utilized at this stage because most of the variables tested were either nominal or ordinal. The attitude factors retained from the prior principal components analysis were utilized at this stage.

The sixth stage in the analytical framework that was employed was the model estimation stage in which two models were estimated. The dependent variables for these two models were; 1) Advertising Awareness (AA) and 2) Destination Awareness (DA). Logistic regression was used for the AA and DA models since the variables were binary, bound by 0 and 1. The forward greatest reduction in Log Likelihood value (-2LL value) method was used to enter variables into the logistic model. The independent variables hypothesized for the AA model included: exposure, TV, radio, magazine, attitudes,

experience, location, income, intention to visit (IV), age and gender. Independent variables used in the DA model included: IV, exposure, location, web-use, experience, and AA.

In the next stage of analysis, the real conversion ratios for the 2003 Travel Michigan advertising campaign were calculated by use of the conversion and tracking models by Siegel and Ziff-Levine (1990) which were presented in figure 3. The final stage of analysis for this study involved the calculation of the return on advertising investment for the 2003 Travel Michigan's advertising campaign. This stage utilized the conversion figures derived from the previous stage of analysis, 2003 advertising expenditure figures from Travel Michigan, and tourist expenditure figures from the household survey conducted by the Michigan Travel, Tourism and Recreation Resources Center of the Department of Parks, Recreation and Tourism Resources at Michigan State University.

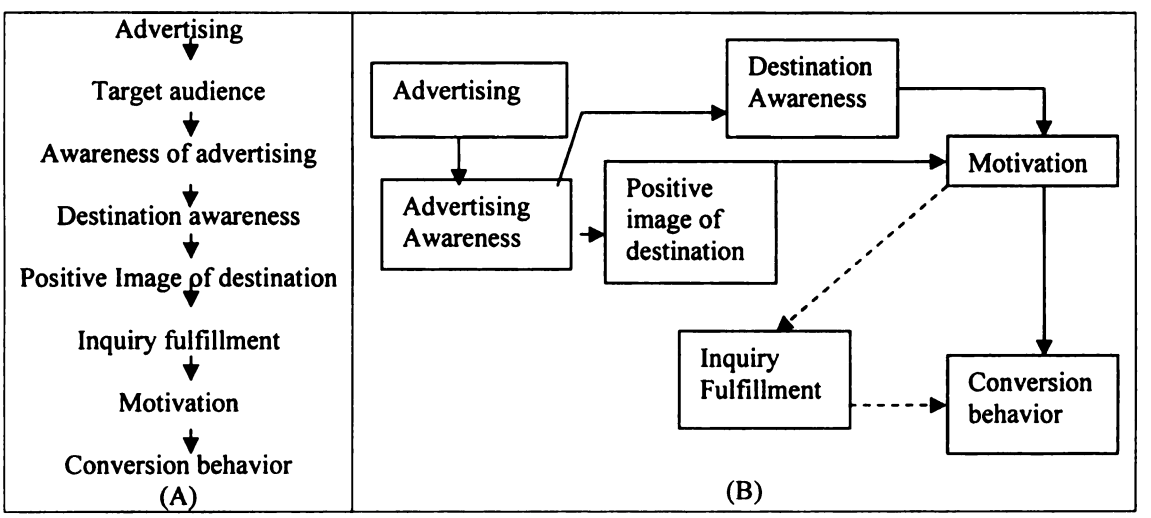

Figure 3: (A) Conversion Model (B) Tracking model (Adapted from Siegel and Ziff-Levine, 1990)

Chapter 4

4.0 Results and Discussion

This chapter covers the findings of the study. The descriptives are discussed first followed by the pre and post campaign comparison results. Hypotheses testing results are discussed next, followed by the conversion estimation results. The chapter is concluded by a discussion of the results on the estimation of actual return on advertising investment.

4.1 Descriptives

There were a total of 1117 respondents for this study of which 209 were interviewed in the pre-advertisement phase (phase 1) and 908 were interviewed in the post advertisement phase (phase 2). The reason for this major discrepancy is mainly technical. The contract for the project was not approved until very late in phase 1 and real data collection did not start until there were only three weeks before the advertisements started running in the three DMAs. As a result the target of at least 300 interviews per DMA per phase originally set was not met. Since the two pre- and post campaign samples were cross-sectional and random no adjustments were made during the analyses to reduce the post campaign sample size to match the pre-campaign one. Despite this limitation, the sample was large enough to enable reasonable analyses and comparisons to be conducted.

The study was cross-sectional not panel implying the pre and post groups were different but each was randomly selected. Since the study was measuring awareness a panel would not have been appropriate, as the subjects would become sensitized.

There were more female respondents than there were male. Of the 1117 respondents, 62% were female and 38 % were male. Of the 209 phase 1 respondents, 43% were male and 57% were female. For phase 2, 37% were male and 63% were female. The average age of the respondents was 46 years. Distribution of respondents in phases 1 and 2 combined among the three DMAs was almost evenly distributed with each DMA representing about a third of the respondents as can be seen in figure 4.

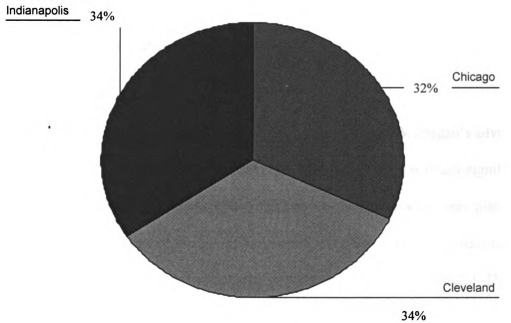

Figure 4: Distribution of Respondents among the three DMAs

A comparison of gender among the three DMAs showed there were more female respondents than there were male in each DMA, and the proportion of females to males was exactly the same for Chicago and Indianapolis and slightly different for Cleveland

(see Table 3). Other respondent characteristics and demographics such as income, household size and ethnicity varied across the three DMAs (Refer to appendix 3).

Table 3: Gender * Number of respondents by their residence DMA

		DMA of Residence			Total
		Chicago	Cleveland	Indianapolis	
Gender	Male	134	146	146	426
	Female	222	229	238	689
Total		356	375	384	1115
Male %		38%	39%	38%	38%
Female %		62%	61%	62%	62%
Total %		100%	100%	100%	100%

*Gender was not recorded for two Chicago DMA respondents

4.2 Pre and Post Advertisement Comparisons

4.2.1 Advertising Awareness

The first stage of analysis was meant to determine whether Travel Michigan's advertising drew the attention of its intended audience, by testing whether there was any significant difference in Advertising Awareness before and after the advertisements were placed. Without people being aware of the advertising in the first place, any further tests to determine the effectiveness of the advertising would not have been meaningful. The Mann-Whitney U non-parametric test was conducted to determine if there were any significant differences in Advertising Awareness (AA) between phases 1 and 2 of the advertising campaign. A non-parametric test was used because it is a more appropriate method when working with nominal data than is the T-test. Since AA was measured nominally (0: not aware; 1: aware) a non-parametric test was appropriate. The results showed a significant difference in Advertising Awareness ($U= 72830$, $p< .01$) between phases 1 and 2. What this result shows is that people were aware of Travel Michigan's advertising after the advertisements were run. The advertising had the initial effect of

catching people's attention. This is a good starting point in the evaluation of the effectiveness of advertising. As illustrated in the models of communication in the preceding chapter, the initial goal of effective advertising is to grab the attention of consumers. The AIDA (Attention, Interest, Desire and Action), Hierarchy of Effects and the Richardson-Haley models indicate getting the attention of the consumer, getting them to even pay attention, is the first and foremost important step in effective communication, let alone persuasion. Getting the attention of the consumer is a necessary though not sufficient condition for effective advertising. Significant differences were also found in Destination Awareness (DA) ($U=48229$; $p < .01$) between phases 1 and 2.

4.3 Hypothesis Testing

This study's objective of determining the effectiveness of Travel Michigan's advertising follows the conversion and tracking models suggested by Siegel and Ziff-Levine (1990) as illustrated in Figure 3 that was presented earlier. For this study, advertising effectiveness was measured in several ways including Advertising Awareness (AA), Destination Awareness (DA), Attitudes, Intention to Visit the state (IV) and Actual Visitation (AV). This stage of analysis focuses on determining the effectiveness of Travel Michigan's advertising on creating awareness of Michigan as a tourism destination, improving people's attitudes/image of the state as a tourism destination, developing motivation to visit the state among the targeted advertisement audiences and stimulating change in consumptive behavior once motivation is developed. This stage of analysis therefore addresses the following hypotheses:

Ha_1: Individuals exposed to Travel Michigan advertising will have greater awareness of the state as a tourism destination, than those who have not been exposed.

Ha_2: Travel Michigan advertising will have a positive effect on changing people's attitudes towards the state as a tourism destination.

Ha_3: Individuals exposed to Travel MI advertising will have greater motivation/ intention to visit the state on a leisure trip, than those who have not been exposed.

Ha_4: Travel Michigan's advertising is effective in generating visits for the state.

After determining the effectiveness of the advertisements on grabing the attention of the consumer, the next step involved testing whether the advertisements had any effect as measured by the four variables (DA, IV, AV and Attitudes) described above. Independent samples T-tests were conducted to test whether there were any significant differences in the four measures of advertising effectiveness between those aware and those not aware of advertising. Intention to Visit (IV), Destination Awareness (DA) and Actual Visitation (AV) were tested first because they were each measured by one variable. Destination Awareness (DA) was measured nominally (0=unaware; 1=aware). Those considered as being aware of Michigan as a tourism destination were the respondents who indicated that Michigan comes to mind when they are thinking of taking a pleasure trip in the United States and Canada. Intention to Visit (IV) was measured through a 5-point ordinal scale (1= definitely visit; 5=very unlikely visit) and Actual Visitation (AV) was measured on a ratio scale by the number of visits an individual has made to the state. Attitude on the other hand was measured by a number of variables that were meant to capture the

different attitudes/perceptions that consumers have towards Michigan's different tourism industry sectors. Each variable was measured on a five-point ordinal scale (1=disagree completely; 5=agree completely).

The results presented in Table 4 show that there are significant differences in DA, IV and AV between those who were aware of advertising and those who were not.

Table 4: T-tests for equality of means for DA, IV and AV between those aware and those not aware of advertisements

	AA	N	Mean	Mean difference	Std. Deviation	t	Sig.
DA	Not aware	377	.17	.15	.376	5.332	.000
	Aware	727	.32		.466		
IV	Not aware	365	3.30	.41	1.661	3.909	.000
	Aware	712	2.89		1.635		
AV	Not aware	376	.69	.61	1.512	3.713	.000
	Aware	726	1.30		3.002		

DA: 0 not aware, 1 aware; IV: 1 definitely visit, 5 very unlikely visit; AV number of times one has visited the state within the past 12 months.

What the results imply is that Travel Michigan's advertising had a significant effect on generating awareness of the state as a tourism destination (DA) ($t = 5.332$; $p < .001$), generating motivation to visit the state (IV) ($t = 3.909$; $p < .001$) as well generating more visits to the state (AV) ($t = 3.713$; $p < .001$).

Advertising was also found to have a significant effect on changing people's attitudes towards Michigan as a tourism destination. All the attitude variables were individually tested to see if there were any significant differences between those individuals that were aware of Michigan advertising and those that were not, and significant differences were found as can be seen in Table 5. The results clearly show that there are significant differences in attitudes/ perceptions of people between those aware and those not aware of Travel Michigan's advertising. People consistently rank Michigan better after being

exposed to the advertisements, than when not. Changing consumer attitudes is an important step in advertising because advertising is understood to influence behavior indirectly through its direct effect on customers' attitudes (Butterfield, Deal and Kubursi, 1998).

Table 5: T-tests results for Attitudes towards Michigan as a tourism destination

	AA	N	Mean*	Mean Diff. A-Un	Std. Dev	t.	Sig.
MI has great restaurants	Unaware	299	3.49	.34	1.160	4.694	.000
	Aware	618	3.83				
MI has lovely small towns	Unaware	302	3.66	.42	1.117	6.038	.000
	Aware	652	4.08				
MI has great shopping opportunities	Unaware	275	3.31	.32	1.187	3.998	.000
	Aware	576	3.63				
MI offers an excellent vacation value for the money	Unaware	209	3.52	.34	1.209	4.031	.000
	Aware	538	3.86				
MI has many interesting historic sites	Unaware	293	3.41	.41	1.177	5.392	.000
	Aware	626	3.81				
MI is a good place for family vacation	Unaware	319	3.65	.50	1.177	7.113	.000
	Aware	686	4.15				
MI offers exciting nightlife and entertainment	Unaware	261	3.15	.27	1.213	3.108	.002
	Aware	526	3.41				
MI is a good place to meet friendly people	Unaware	312	3.49	.31	1.151	4.321	.000
	Aware	658	3.80				
MI is great for winter outdoor recreation activities	Unaware	291	3.47	.38	1.332	4.398	.000
	Aware	598	3.84				
MI offers much scenic appeal	Unaware	326	3.69	.44	1.195	6.387	.000
	Aware	692	4.13				
MI has a lot of high quality lodging	Unaware	263	3.28	.44	1.150	5.610	.000
	Aware	543	3.72				

Table 5 continued

MI is an exciting place to visit	Unaware	323	3.30	.39	1.243	5.107	.000
	Aware	684	3.69				
MI is great for summer outdoor recreation activities	Unaware	324	3.70	.49	1.173	7.310	.000
	Aware	687	4.19				
MI is close enough for a weekend getaway	Unaware	344	3.88	.37	1.212	5.218	.000
	Aware	709	4.25				
There is plenty for me to see and do on a MI getaway trip	Unaware	324	3.49	.51	1.248	6.902	.000
	Aware	688	4.00				
MI is a great place to relax and unwind	Unaware	327	3.49	.47	1.177	6.556	.000
	Aware	696	3.96				
Vacationing in MI is a great value for my money	Unaware	284	3.42	.41	1.144	5.310	.000
	Aware	615	3.84				
MI is great for enjoying quality time with family or friends	Unaware	328	3.57	.49	1.192	6.767	.000
	Aware	696	4.05				
MI has great beaches	Unaware	264	3.21	.49	1.345	5.369	.000
	Aware	576	3.70				
MI is great for short getaway trips	Unaware	345	3.61	.53	1.253	7.264	.000
	Aware	708	4.14				
MI is a great place to escape from my daily routine	Unaware	339	3.23	.50	1.268	6.340	.000
	Aware	706	3.73				
MI is a great vacation destination for the whole family	Unaware	330	3.53	.58	1.193	8.080	.000
	Aware	700	4.10				

*Attitude was measured via a 5 point scale with 5 equal to 'agree completely' and 1 equal to 'disagree completely.'

The next step in the analysis framework included factor analysis of the attitude variables in an effort to reduce the data as well as determine if there were any similarities among the many attitude variables. The Kaiser-Meyer-Olkin (KMO) measure of sampling adequacy and the Bartlett's test for sphericity were conducted to test the suitability of the

data set for factor analysis. The KMO value was 0.946 greater than the required minimum of 0.6 and the Bartlett's test was significant at the .01 level indicating that the data set was suitable for factor analysis (refer to Appendix 4). The R-type factor analysis was utilized since the relationship being studied included variables not cases. The extraction method used was principal components analysis because the objectives were data reduction as well as determination of total variance not only common variance. Varimax orthogonal rotation was used to make interpretation of the results easier as well as to redistribute the variance from the earlier components in-order to produce a more meaningful component pattern. Varimax rotation was selected mainly because it is the best choice when the goal is to reduce the number of the original variables to a smaller set of uncorrelated variables to be used in subsequent analyses. The factors created from this stage of the analysis were to be used later for regression analysis, therefore making Varimax rotation the more suitable choice among orthogonal rotation methods.

The results gave a total of 22 components with different variables loading differently on each of the 22 components as illustrated in Table 6. The initial extraction and rotated results varied, with the variation more evenly distributed with rotation than without as shown in Tables 6 and 7.

Table 6: Principal components analysis results showing loading of each variable on the components

	Un-rotated Component Matrix			Rotated Component Matrix			Communality
Variable /Components	1	2	3	1	2	3	
MI is a great vacation destination for the whole family	.812	-.297	.076	.790	.202	.296	.753
MI is a great place to escape from my daily routine	.769	-.144	.024	.663	.309	.278	.612
MI is a great for short getaway trips	.681	.115	.492	.373	.224	.728	.719
MI has great beaches	.684	-.257	-.131	.692	.257	.077	.552
MI is great for enjoying quality time with family or friends	.767	-.179	-.002	.688	.297	.245	.621
Vacationing in MI is a great value for my money	.777	-.079	.188	.607	.282	.443	.645
MI is a great place to relax and unwind	.835	-.093	.049	.676	.369	.340	.708
There is plenty for me to see and do on a MI getaway trip	.817	-.001	.005	.607	.444	.320	.668
MI is close enough for a weekend getaway	.566	.308	.632	.144	.229	.861	.814
MI is great for summer outdoor recreation activities	.798	-.188	.118	.703	.251	.359	.686
MI is an exciting place to visit	.804	.103	-.085	.538	.551	.267	.665
MI has a lot of high quality lodging	.747	.193	-.234	.454	.652	.138	.650
MI offers much scenic appeal	.819	-.211	-.032	.751	.316	.230	.716
MI is great for winter outdoor recreation activities	.592	-.129	-.231	.551	.342	-.009	.420
MI is a good place to meet friendly people	.746	.078	-.045	.507	.483	.271	.564
MI offers exciting nightlife and entertainment	.635	.562	-.138	.115	.802	.284	.738
MI is a good place for family vacation	.843	-.232	.004	.778	.298	.264	.764
MI has many interesting historic sites	.775	.084	-.215	.544	.582	.135	.654
MI offers an excellent vacation value for the money	.803	.067	.125	.537	.428	.439	.665
MI has great shopping opportunities	.749	.343	-.190	.350	.737	.221	.714
MI has lovely small towns	.775	-.103	-.099	.654	.398	.184	.620
MI has great restaurants	.776	.268	-.202	.422	.705	.200	.715

The latent root criterion was used to select the components to retain. With the latent root criterion, only those components with eigenvalues greater than one are retained. Only three components were retained in this case. The eigenvalues were 12.598, 1.062 and 1.001 for components 1, 2 and 3 respectively. The rest of the components had eigenvalues of less than one (see Table 7), therefore were not retained for further analysis.

Table 7: Principal Components Analysis results showing eigenvalues for the components and % of variation explained by each component

Component	Initial Eigenvalues			Un-rotated matrix Loadings			Rotated matrix Loadings		
	E.value	% of Variance	Cumulative%	E.value	% of Variance	Cumulative%	E.value	% of Variance	Cumulative%
1	12.598	57.265	57.265	12.598	57.265	57.265	7.414	33.702	33.702
2	1.062	4.828	62.093	1.062	4.828	62.093	4.501	20.461	54.163
3	1.001	4.552	66.645	1.001	4.552	66.645	2.746	12.482	66.645
4	.765	3.479	70.124						
5	.672	3.056	73.180						
6	.595	2.707	75.887						
7	.532	2.420	78.307						
8	.520	2.362	80.669						
9	.457	2.077	82.746						
10	.434	1.972	84.718						
11	.381	1.733	86.451						
12	.376	1.710	88.161						
13	.354	1.608	89.769						
14	.325	1.479	91.249						
15	.302	1.373	92.621						
16	.288	1.307	93.929						
17	.260	1.183	95.112						
18	.258	1.171	96.283						
19	.238	1.083	97.366						
20	.223	1.015	98.381						
21	.192	.872	99.253						
22	.164	.747	100.000						

Extraction Method: Principal Component Analysis.

In the initial un-rotated extraction, component 1 explained about 57% of the total variation of all the variables, and components 2 and 3 accounted for only 4.8% and 4.5%

each respectively. Together the three components accounted for 66.6% of the total variation as shown in Table 7.

Examination of the individual variables and the components shows that all but one (MI is great for winter outdoor recreation) variable had a communality value of less than the critical value of .5. The rest of the variables have more than 50% of their variation being explained by the 3 components. The results also clearly show that in the un-rotated solution all the variables load significantly on the first component, and the first component accounts for 57% of the 66.6 % total variation with the other two components accounting for the small remainder. The rotated results, however, show an even distribution of the variance. The total variance explained remains 66.6% but is evenly distributed. Components 1, 2 and 3 each account for 33.7%, 20.5% and 12.5% of the variation respectively. The variables also load heavily on only one of the three components making it a lot easier to interpret the results.

For naming the variables only those variables with factor loadings equal to or greater than .5 were considered under each factor. In cases where one variable had two or more components on which it loaded greater than .5, only the greater one was considered. The third component was the easiest to name as it had only two variables with greater than .5 factor loadings; these were 'MI is close enough for a weekend getaway,' and 'MI is great for short getaway trips,' with loadings of .861 and .728 respectively. This component appears to represent perceptions of people regarding how close Michigan is for short getaways or weekend trips. This component was named; 'MI is close enough for short getaways.' The second component had six variables significantly loading on it, which

appear to revolve around aspects of entertainment. The variable that had the highest loading on this component was; 'MI offers exciting nightlife and entertainment,' with a factor loading of .802 (refer to Table 6). The component was named; 'MI offers great entertainment.' The first and most important component had sixteen variables with factor loadings greater than .5; however, two were excluded from this component because they loaded even higher on the second component (see Table 6). Component 1 appears to revolve around perceptions of people towards Michigan as a family destination with family oriented activities and entertainment. This component is the most important of the three as it accounts for over half of the total 66.6% variation. The results suggest that people view Michigan as a good tourism and vacation destination for the family. The variable that loaded most heavily on this component with a .79 factor loading was; 'MI is a great vacation destination for the whole family.' While both components 1 and 2 have entertainment and activities variables significantly loading on each of them, the kinds of activities and entertainment differ.

Component 2 represents mainly the kinds of activities for the single adults or couples without children such as night entertainment, shopping and dining while component 1 represents the activities and entertainment for adults with children such as outdoor recreational activities. The value variables, 'MI offers an excellent vacation value for the money,' and 'Vacationing in MI is a great value for my money,' both loaded on this component. Price sensitivity is a trait more associated with families with children than with adults traveling without children. Families with children most often have less discretionary income, thus look for ways to stretch their dollars to accommodate the

needs of the entire family on their limited travel budgets. This component therefore, was named; 'MI is a great family destination.'

The next stage of analysis involved correlation analysis to address the following hypotheses:

> Ha_5: Attitudes towards Michigan as a tourism destination will be positively correlated to Advertising Awareness (AA), Destination Awareness (DA) and Intention to Visit (IV).
>
> Ha_6: Distance of DMA to Michigan will be negatively correlated to AA, DA and IV.
>
> Ha_7: Annual income will be positively correlated to AA, DA and IV.

These hypotheses are based mainly on the persuasion theories such as the H-J-K theory of communication persuasion which state that the success of communication and persuasion also depend on several audience factors. The initial position of the audience affects the extent to which members comprehend the message they are being exposed to. The initial position includes such factors as personality, socio-economic status, intelligence and others as depicted earlier in Figure one (Tan, 1985). According to cognitive dissonance theory and selective processes theory, people attend to incoming messages selectively, depending on their backgrounds. People with low income or those who reside further from Michigan might selectively avoid Travel Michigan's advertising. These hypotheses, therefore, intend to examine the relationship that these audience factors have with advertising awareness (AA), destination awareness (DA), and intention to visit (IV).

The non-parametric Spearman's rho correlation test was used since most of the variables being tested were either nominal or ordinal. The parametric tests such as the Pearson correlation are more suited for interval and/or ratio data. The three factors retained from the previous factor analysis procedure were used at this stage to represent the attitudes variables.

The results showed that attitudes/perceptions towards Michigan as a tourism destination are significantly positively correlated with both Advertising Awareness and Intention to Visit the state as shown in Table 8. Correlation between one of the attitude variables (MI offers great entertainment) and Destination Awareness (DA), however, was not significant.

Table 8: Correlation Results between Attitude Factors and AA, DA and IV (Spearman's rho correlation)

Attitude factor /Variable	Advertising Awareness		Destination Awareness		Intention to Visit	
	Coefficient	Sig. (2-tailed	Coefficient	Sig. (2-tailed)	Coefficient	Sig. (2-tailed)
MI is a great family destination	.266**	.000	.204**	.000	.225**	.000
MI offers great entertainment	.101*	.039	.096	.050	.210**	.000
MI is close enough for short getaways	.149**	.002	.133**	.006	.157**	.000

** Correlation is significant at the 0.01level (2-tailed); * Correlation is significant at the 0.05 level (2-tailed).

The results show the attitudes people have towards Michigan as a tourism destination are positively related to their awareness of advertising, destination and intention to visit the state. The attitudes towards Michigan as a family destination are more highly correlated

with all three variables (i.e., AA, DA and IV), than are the other two attitude factors. This indicates advertising awareness increases as people's attitudes towards Michigan as a family destination improve and vice versa. This implies that for Travel Michigan's advertising to get more attention, it should most importantly focus on improving its image as a family destination. Both Destination Awareness and Intention to travel are also positively correlated with attitudes towards Michigan as a suitable family tourism destination. As people's attitudes about Michigan as a family destination improve, so does their awareness of Michigan as a destination and intention to visit the state.

Attitude towards Michigan as a close destination for short trips was the next most highly correlated variable with AA, DA and IV with correlation coefficients of .149, .133, and .157 respectively. People attend more to and become more aware of advertising as they view Michigan as a suitable destination for short or weekend getaways. This result is consistent with other research that has been conducted which reveals that Americans now take more weekend and short getaways, than they did ten years ago (TIA, 2003). This may also be attributable to current and most recent world events such as 9/11 that resulted in a reduction in long haul trips as people would rather stay closer to home and visit destinations to which they can drive instead of flying. Therefore, destination marketers such as Travel Michigan need to be positioned to attract those markets closer to home.

Attitudes towards Michigan as a great destination for adults without children were the least positively correlated with all three: Advertising Awareness (AA), Destination

Awareness (DA) and Intention to Visit (IV). In-fact, the correlation between Destination Awareness (DA) and 'MI offers great adult entertainment' was not significant as shown in Table 8. The results show the relationship between people's attitudes towards Michigan as having great adult entertainment and both Destination Awareness and Intention to Visit, though positive is not as strong as the relationship between Advertising Awareness and Destination Awareness with the family and distance attitude factors. The results imply that in crafting its advertising messages Travel Michigan needs to incorporate the suitability of the state as a destination for both the family and short getaways in-order to increase the audience's attention, destination awareness and motivation to visit the state.

Some of the relationships hypothesized in Ha_6 and Ha_7 were supported by results from the analyses conducted, while others were not.

Table 9: Correlation results for Annual Income, DMA location and AA, DA, and IV

	Advertising Awareness		Destination Awareness		Intention to Visit	
Spearman Correlation	Coefficient	Sig. (2-tailed)	Coefficient	Sig. (2-tailed)	Coefficient	Sig. (2-tailed)
Annual Income	.088**	.009	.045	.184	.131**	.000
DMA location	-.056	.064	-.64*	.033	-.083**	.006

** Correlation is significant at the 0.01level; *Correlation is significant at the 0.05 level.

The results presented in Table 9 support the hypothesized relationship that income is positively correlated with advertising awareness, indicating that as people's incomes increase they tend to be more aware of vacation or travel advertising. This agrees with the theories of cognitive dissonance and selective processes that individuals actively select

messages that they have the financial means to pursue and avoid those messages for products they can't afford to purchase. Individuals with low income who can't afford to take vacations, might consciously avoid travel advertising messages. On the other hand, those with higher incomes, because they can afford to take vacations and leisure trips might consciously attend to travel advertising in search of information to use in planning their trips. Annual income also has a significant positive relationship with Intention to Visit the state as was hypothesized. This relationship, however, is more obvious than not, as people's incomes increase so do their intentions to visit the state on a vacation or leisure trip. It follows Engel's law which states that as people's incomes increase the proportion they spend on basic commodities such as food and shelter decreases and the proportion they spent on luxuries increases (Asimakopulos, 1978).

Results also indicate that the relationships between DMA location and both Destination Awareness and Intention to Visit were as hypothesized. Results presented in Table 9 show that Intention to travel to the state of Michigan for leisure decreases as the distance from Michigan increases. This again, corroborates the fact that people are more inclined to take shorter than longer trips. People's intentions to visit the state of Michigan decrease as we move from nearby Cleveland to Chicago to Indianapolis. The further away people reside from Michigan the less likely they are to take pleasure trips to Michigan. However, no relationship was found between DMA location and awareness of Travel Michigan's advertising (see Table 9). Even though the hypothesis has been disproved, this is, however, a good result for Travel Michigan because it means that its advertising was consistently and equally received across the three DMAs.

4.3.1 Model Estimation

The next stage of analysis involved estimation of two models including AA and DA through logistic regression analysis. AA and DA were estimated through logistic regression, as they are both dichotomous variables bound between 0 and 1. This stage of analysis sought to address the following hypotheses:

> Ha_8: Having taken a pleasure trip to Michigan before (Experience) will have an effect on advertising awareness.
>
> Ha_9: Advertising channel has a significant effect on advertising awareness.

4.3.1.1 Advertising Awareness

The following Unaided Advertising Awareness (UAA) model was hypothesized:

$UAA = f(X_1,\ldots,X_n)$ where:

UAA = Unaided Advertising Awareness
(X1...Xn) = (Exposure, TV, Radio, Magazine, Attitudes, Experience, Location, Annual Income, IV, Age and Gender)

The forward greatest reduction in Log Likelihood value (-2LL value) method was used to enter variables into the logistic regression model. The variables were entered in six steps with Exposure, TV, Radio, Age, Experience and Attitudes entered at steps 1, 2, 3, 4, 5, and 6, respectively. The p-value for entering into the model was set at .05. Results are presented in Table 10 for the variables that met the minimum criterion established to enter the model. The variables that didn't meet this criterion were: location, IV, annual income, magazine and the three attitude factors which included: 1) MI as a great family

destination, 2). MI as having great adult entertainment and 3) MI close enough for short getaways.

Table 10: Variables in the Unaided Advertising Awareness (UAA) Model

Step	Variable	B	S.E.	Wald*	Sig.	Exp (B)
Step 1	Exposure	.066	.006	127.727	.000	1.068
	Constant	5.214	.568	84.115	.000	183.756
Step 2	Exposure	.066	.006	124.026	.000	1.068
	TV	1.304	.236	30.556	.000	3.682
	Constant	4.660	.573	66.094	.000	105.607
Step 3	Age	.030	.007	17.336	.000	1.030
	Exposure	.067	.006	126.528	.000	1.069
	TV	1.308	.242	29.317	.000	3.698
	Constant	3.348	.646	26.832	.000	28.451
Step 4	Age	.030	.007	17.490	.000	1.031
	Exposure	.067	.006	127.448	.000	1.070
	Experience	.745	.245	9.267	.002	2.106
	TV	1.227	.245	25.083	.000	3.410
	Constant	3.096	.654	22.397	.000	22.107
Step 5	Age	.029	.007	15.342	.000	1.029
	Gender	.764	.268	8.111	.004	2.147
	Exposure	.068	.006	128.731	.000	1.070
	Experience	.759	.247	9.419	.002	2.135
	TV	1.217	.248	24.174	.000	3.379
	Constant	1.974	.761	6.732	.009	7.198
Step 6	Age	.031	.008	17.348	.000	1.032
	Gender	.761	.270	7.925	.005	2.141
	Exposure	.067	.006	125.307	.000	1.069
	Experience	.738	.249	8.764	.003	2.093
	Radio	.693	.274	6.418	.011	1.999
	TV	1.041	.258	16.248	.000	2.831
	Constant	1.632	.777	4.406	.036	5.113

*Assesses the significance of each variable entered in the model

The final model is as follows:

UAA = 5.11 + 2.83TV + 2.14 Gender + 2.09Experience + 2.00Radio + 1.07Exposure + 1.03Age

According to all the Goodness of fit tests run including the R^2 values, Hosmer and Lemeshow Test and step Chi-square tests presented in Table 11 the model is a good fit. The Nagelkerke R^2 value for the model is .81, implying that the final model explains an estimated 81% of the variation in Unaided Advertising Awareness. The Hosmer and Lemeshow test measures the overall model fit, and the statistic indicates that there was no statistically significant difference between the observed and predicted outcomes (Hair et. al., 1998). The higher the p-value the better the model fit since a higher p-value implies that there are no significant differences between the predicted and observed model. The Omnibus test shown in Table 11 measures the significance of model coefficients at each step, and they are all significant for this model. The Wald statistic assesses the significance of each variable entered in the model, and each one of the six variables entered is significant at the .01 level except for the constant. All the goodness of fit measures support the six-variable model stated above.

Table 11: Goodness of fit Tests for the Unaided Advertising Awareness (UAA) Model

	Model Summary		Hosmer and Lemeshow Test*		Omnibus Test of Model Coefficients	
Step	-2 Log likelihood	Nagelkerke R Square	Chi-square	Sig.	Chi-square	Sig.
1	505.289	.770	1.069	.785	873.102S	.000
					873.102M	.000
2	474.543	.787	2.220	.695	30.746S	.000
					903.848M	.000
3	456.516	.797	14.305	.074	18.027S	.000
					921.876M	.000
4	447.257	.802	8.559	.381	9.258S	.002
					931.134M	.000
5	438.669	.806	10.270	.247	8.589S	.003
					939.722M	.000
6	432.363	.810	11.629	.169	6.306S	.012
					946.028M	.000

S: Step; M: Model

* Measures overall model fitness. The higher the p-value the better since we fail to reject the hypothesis that 'there is no difference between predicted and observed values.'

The results show that advertising channel has a significant effect on advertising awareness. If a person saw the travel advertising on TV instead of the other channels increases the odds of one recalling the advertising. TV ($\beta = 2.831$; $p = .000$) is the most important predictor of unaided awareness of travel advertising. Being exposed to radio advertising also significantly increases the odds of top-of-mind recall of advertising. Radio is certainly more important than magazine advertising but not as important as Television advertising. This result supports hypothesis 9, which states that advertising channel has an effect on advertising awareness. This result agrees with the findings presented by Kisielius (1982) who stated that information presented pictorially stimulates more cognitive elaboration therefore resulting in the development of more storage locations and pathways in memory, which in turn also increases the likelihood of the information being retrieved when it is needed for later tasks.

The regression model results also showed that experience has a significant effect on advertising awareness ($\beta = 2.093$; $p = .003$), implying that having traveled in the state on a leisure trip prior to being exposed to advertising increases the odds of one's awareness of the state's travel advertising. Those who had experience with leisure travel in the state of Michigan were more likely to be aware of the state's travel advertising than those who didn't have any experience. This result is also consistent with the theory of Cognitive dissonance discussed in the preceding chapters which says that people selectively attend to advertisements of products they have purchased to reinforce their decision and reduce post-purchase dissonance (Haley, 1985). People who have traveled to the state before might be more aware of the state's travel advertising because the advertisements revive

the memories of the experience they had during their visit, or convince them that their choice of a destination was a good one.

Exposure to advertising, as measured by the number of times an individual was exposed to advertising was also significant ($\beta = 1.069$; $p < .001$). The more people were exposed to travel advertising the higher the odds of them recalling the advertisements. The study also shows that gender has a significant effect on advertising awareness ($\beta = 2.141$; $p = .005$). Being female increases the probability of top-of-mind awareness of Travel Michigan advertising. According to Meyers-Levy's 1989 selectivity hypothesis, adult males often don't comprehensively process available information. Instead they tend to simplify the processing task, and they focus on a single often self-related cue from the message. Adult females on the other hand, use a comprehensive strategy to process information. Females tend to assimilate all available cues and engage in more detailed elaboration of message content than males (Meyers-Levy, 1989). The finding is also consistent with the household travel decision-making dynamics. Studies have shown that most of the travel decision-making is done by females. A study by Mottiar and Quinn (2004) showed vacation discussion is initiated mostly by females (58%) as compared to males (25%). Females are also most likely to choose the travel agent (34%) than males (16%) and also make the bookings (54%) compared to 22% for males. However, there are some decisions that are made jointly such as how much to spend, which accommodation to use and when to travel.

4.3.1.2 Destination Awareness

The following Destination Awareness (DA) model was hypothesized:

$DA = f(X_1 \ldots\ldots X_n)$, where:

DA = Destination Awareness
$(X_1 \ldots X_n)$ = (Intention to Visit (IV), Exposure, Location, Web-use, Experience, Advertising Awareness (AA))

Logistic regression analysis that was performed produced a four-variable model with four of the six variables included. The cut off p-value for inclusion into the model was .05. The AA and location variables were excluded from the final model because they failed to meet this criterion. Details are provided in Table 12. The model that resulted was:

DA = .077 + 2.06 Experience + 1.90 Web-use + 1.49 IV + 1.01 Exposure

The entered variables were all significant at the .01 level and each variable's effect on reduction of Log Likelihood Value (–2LL) was also significant at the .01 level.

Table 12: Variables included in the Destination Awareness (DA) Model at each step.

Step	Var.	B	S.E.	Wald*	Sig.	Exp(B)	Model Log L	Change in -2 LL	Sig. of Change
1	IV	.523	.048	118.641	.000	1.687	-622.114	136.855	.000
	Const	-2.737	.188	210.881	.000	.065			
2	IV	.411	.053	59.970	.000	1.509	-573.253	63.212	.000
	Expe.	.804	.164	23.999	.000	2.235	-553.687	24.080	.000
	Const	-2.753	.191	207.292	.000	.064			
3	Expo.	.005	.002	10.162	.001	1.005	-541.647	10.365	.001
	IV	.407	.054	57.811	.000	1.502	-566.928	60.927	.000
	Expe.	.796	.165	23.338	.000	2.216	-548.172	23.414	.000
	Const	-2.549	.200	161.805	.000	.078			
4	Expo.	.005	.002	9.319	.002	1.005	-537.625	9.489	.002
	Web	.642	.240	7.187	.007	1.901	-536.465	7.167	.007
	IV	.399	.054	55.042	.000	1.490	-561.758	57.755	.000
	Expe.	.722	.168	18.525	.000	2.058	-542.140	18.519	.000
	Const	-2.561	.201	162.012	.000	.077			

S. E: Standard Error; *Assesses the significance of each variable in the model

The R^2 value for the model is .223 and the goodness of fit tests presented in Table 13 show that the model is a good fit.

Table 13: Goodness of fit tests for the Destination Awareness Model

Step	Model Summary		Hosmer and Lemeshow Test*		
	-2 Log likelihood	Nagelkerke R Square	Chi-square	df	Sig.
1	1107.373	.174	6.565	3	.087
2	1083.294	.203	10.696	5	.058
3	1072.929	.215	11.806	8	.160
4	1065.762	.223	13.841	8	.086

* Measures overall model fitness. The higher the p-value the better, we fail to reject the hypothesis that 'there is no difference between predicted and observed values.'

Experience with travel in the state was the most important predictor of destination awareness ($\beta = 2.058$; $p = .000$). Web use was the next most important predictor of awareness of Michigan as a tourism destination ($\beta = 1.901$; $p = .000$). Having visited the state's tourism website increased the odds of one being aware of the state as a tourism destination. Destination awareness was measured by asking respondents to name destination states or cities that come to mind when they think of taking a pleasure trip in the United State and Canada. This implies that, Michigan comes to mind when those people who visit the state's tourism website are thinking of taking a pleasure trip more often than those who don't visit Michigan's website. This means that the state's tourism web site is an important tool in generating awareness of the state as a tourism destination.

Intention to visit (IV) the state, though not as important as web use and experience, also increases the odds of one's awareness of the state as a tourism destination ($\beta = 1.490$; $p < .001$). Those intending to visit the state actively search for information, therefore, increasing their awareness of the state as a tourism destination. Exposure to advertising also has a significant effect on destination awareness ($\beta = 1.001$; $p = .002$). The coefficient for Exposure is very close to one though meaning that its importance in increasing the odds of one being aware of the state as a tourism destination is very minimal as compared to the other three independent variables in the model.

4.4 Conversion Rates

4.4.1 Advertising Conversion Model

The last stage of analysis involved calculation of actual conversion ratios to determine the effectiveness of Travel Michigan's advertising. Effectiveness of Travel Michigan advertising was determined following the conversion and tracking models suggested by Siegel and Ziff-Levine (1990).

An overview of the analysis performed in calculating conversion ratios is presented in Figure 5. Out of the 908 people that were potentially exposed to Travel MI advertising in the post campaign phase, 769 were found to be aware of the advertising, an 85% conversion rate at that stage. To estimate the conversion rate for the proceeding stage, cross tabs were used to determine the proportion of the people who were aware of advertising, and who also had destination awareness. The analysis showed that 225 (29%) of the people who were aware of Travel Michigan's advertising were also aware of the state as a tourism destination.

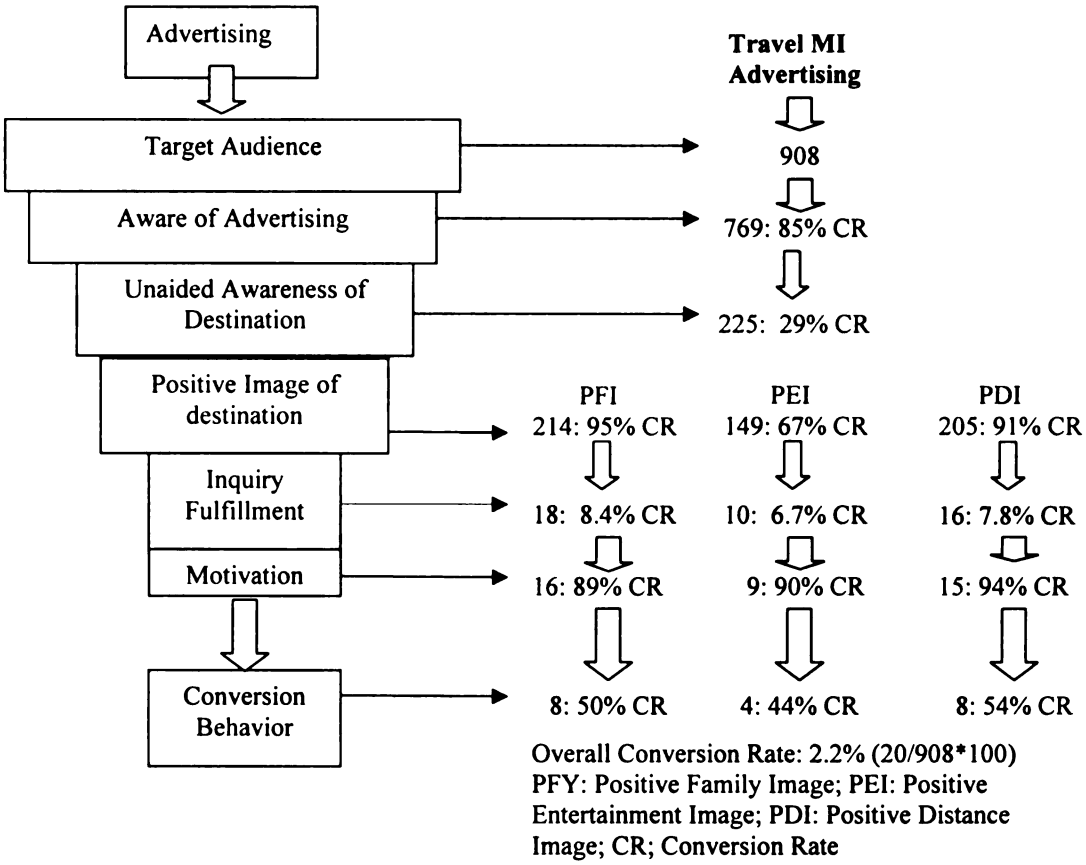

Figure 5: The Conversion Model for Travel Michigan's 2003 Travel Advertising (Adapted from Siegel and Ziff-Levine, 1990)

To determine the proportion of the target group that hold a positive image of the state as a tourism destination, three attitude variables were used to represent the three attitude factors. The three variables used were those that had the highest loading values on each component in the factor analysis. These attitude variables were:

1. Michigan is a great vacation destination for the whole family
2. Michigan offers great nightlife and entertainment
3. MI is close enough for short getaways

To perform this analysis, the three variables were each re-coded. Ranks 1-2 were recoded 0 representing negative attitude and ranks 3-5 were re-coded 1 representing positive

attitude towards MI as a tourism destination. A new variable was also created to represent the 225 individuals who had both advertising and destination awareness. Out of the 225 respondents who had both advertising and destination awareness, 214 (95%) had a positive image of the state as a suitable tourism destination for the whole family, 149 (67%) had a positive image of the state as a destination suitable for adults seeking exciting nightlife and 205 (91%) had a positive image of the state as being a close enough destination for short get aways as shown in Table 14.

The high conversion rates at this stage showed that, once people are aware of the destination, then their image or attitudes of the state as a tourism destination improve substantially. Combining the three image factors gives an average conversion rate of 84%. The challenge, however, is to improve the content of advertisements to highlight the important attributes of the state's tourism destinations because of the very low conversion rate (29%) from the Advertising Awareness stage to the Destination Awareness stage. Michigan is not high on the list of destinations that people consider when they are thinking of taking a pleasure trip. While the advertisements reach a lot of people, they are not as effective in informing people what the state has to offer to potential tourists.

Table 14: Cross-tab results for AA & DA with the three Image Factors

	Family Destination Image				Entertainment Image				Distance Image			
	*Unclassified	Negative image	Positive image	Total	*Unclassified	Negative image	Positive image	Total	*Unclassified	Negative image	Positive image	Total
Aware	4	7	214	225	56	20	149	225	2	18	205	225

* Individuals who had neither negative nor positive image

The conversion ratios from the Image stage to the Inquiry fulfillment stage, however, were very low. Only 18 (8.4%) of the 214 people who had a positive family image (PFI) of the state inquired, 10 (6.7%) of the 149 individuals who had a positive entertainment image (PEI) inquired and only 16 (7.8%) of the total 205 people who had a positive distance image (PDI) inquired. This result supports the claim made by Siegel and Ziff-Levine (1990) that the inquiry fulfillment stage while it may facilitate conversion is certainly not a necessary condition for advertising-induced visitation. The results showed that only 18 out of the 214 individuals who had positive image of the state as a family friendly tourism destination used the toll-free telephone number to inquire about travel information. The other two Image (Youthful and Distance) factors had conversion rates of 6.7% and 7.8%, respectively (refer to Table 15). The average conversion rate for this stage was 7.6%. Telephone inquiries have become less important given that people are increasingly using the web for travel information. As a result, the 'telephone inquiry fulfillment' requirement of the conversion model makes it less effective in measuring advertising effectiveness. Travel Michigan has deemphasized the toll free telephone number in its advertisements.

To determine the conversion rates from the Inquiry-fulfillment to the Motivation stage, the Intention to Visit (IV) variable was used. The variable was re-coded to have only two classes representing those who had motivation to travel and those who didn't. The original variable was an ordinal level variable coded from 1-5: 1 being "will definitely visit," 2: "very likely visit," 3: "somewhat likely visit," 4: "somewhat unlikely" and 5 "will very unlikely visit." The variable was recoded 0 and 1, 0 representing no

motivation to travel and 1 representing motivation to travel. All those who gave responses from 1 to 3 were considered as having some motivation to visit and those with responses from 4 to 5 were considered as not having any intention/ motivation to visit the state.

Table 15: Conversion rates from Image stage to Inquiry-Fulfillment stage

	Family Destination Image					Entertainment Image					Distance Image				
	*Unclassified	Used toll-free	Didn't use toll-free	Total	Conversion	*Unclassified	Used toll-free	Didn't use toll-free	Total	Conversion	*Unclassified	Used toll-free	Didn't use toll-free	Total	Conversion
Positive Image	5	18	191	214	8.4%	4	10	135	149	6.7%	5	16	203	205	7.8%

*Refers to individuals who indicated that they 'didn't know' or refused to respond to that question

The results of this stage show very high conversion rates from the Inquiry stage to the Motivation stage. Out of the 18 individuals who passed through all the preceding stages, 16 generated motivation to visit the state, an 89% conversion rate from the preceding stage. The other two groups, those who had a positive image of the state being an exciting destination and those who had a positive distance image, each had 94% and 90% conversion rates respectively as shown in Table 16. The average conversion rate for this stage from the preceding Inquiry-Fulfillment stage was 91%. What this result means is that people who use the toll free telephone number to inquire and/ or ask for the state travel information have great motivation to take a pleasure trip to the state of Michigan.

Table 16: Conversion rates from the Inquiry to the Motivation stage

	AA, DA, positive family image and inquired	AA, DA, positive Youthful image and inquired	AA, DA, positive Distance image and inquired
No motivation to visit	2	1	1
Motivation to visit	16	9	15
Total	18	10	16
Conversion rate	89%	90%	94%

The results also show that the distance factor generates greater motivation to visit the state than any of the other two image factors. However, even though the family image factor has a lower conversion rate from the inquiry to the motivation stages, it still drives more people through the stages than any of the other image factors.

The last stage on the conversion model involves determining the conversion rate from the Motivation to the Actual Visitation (AV) stage. The original AV variable was measured

at a ratio level representing the number of times a respondent had visited the state. This variable was re-coded to enable cross-tab analysis. The new variable was a nominal level one with 0 representing no travel and 1 representing those that had traveled in the state on a pleasure trip. Also, not all the people who took a pleasure trip to the state were influenced by the advertising, therefore, only those individuals who indicated that their travel was influenced by the advertisements were included in the calculation of the final 'conversion behavior' stage.

The results show that exactly 20 (50%) of the total 40 people who filtered through all the preceding stages traveled to the state and that their travel was influenced by their exposure to the state's travel advertising. However, the results presented in Table 17 also show that a total of 102 (11.2%) out of the 908 phase 2 respondents took a pleasure trip in the state of Michigan and also indicated that advertising primarily influenced their trip. These individuals didn't, however, all pass through the conversion process proposed by the Conversion Model. This, therefore, implies that by making inquiry a necessary condition, the Conversion Model underestimates the effects of advertising.

Table 17: Conversion rates for the 'Conversion Behavior' stage

	Number of people who don't meet (DM) or meet (M) all of the conditions, AA, DA, Positive Family Image, Inquiry and Motivation				Number of who don't meet (DM) or meet (M) all of the following conditions, AA, DA, Positive Entertainment Image, Inquiry and Motivation				Number of people who don't meet (DM) or meet (M) all of the following conditions, AA, DA, Positive Distance Image, Inquiry and Motivation			
	Unclassified***	DM	M	Total	Unclassified***	DM	M	Total	Unclassified***	DM	M	Total
Unclassified**	6	286	3	295	21	272	2	295	1	292	2	295
Travel not influenced by advertising	7	499	5	511	43	465	3	511	3	503	5	511
Travel influenced by advertising	3	91	8	102	12	86	4	102	4	90	8	102
Total	16	876	16	908	76	823	9	908	8	885	15	908
Conversion rate		10.4%	50%*	11.2%		10.4%	44%*	11.2%		10.2%	53%*	11.2%

* Conversion rates from the preceding 'Motivation' stage

** Refers to those individuals who indicated that they were not sure or refused to respond to the question.

*** Refers to those individuals whose response was 'don't know' or refused to respond to at least one of the listed conditions.

By combining all the individuals who took a pleasure trip to the state of Michigan whose trip was influenced by the state's advertising gives an overall conversion rate of 2.2% ((8 + 4 + 8/ 908)*100). The overall conversion rate including those individuals who were not captured by the conversion model comes to 11.2%.

4.4.2 The Advertising Tracking Model

For two reasons, the tracking model conversion rates are higher and a lot more realistic than those calculated using the conversion model. First, the tracking model does not consider inquiry as a necessary step to conversion, and second the tracking model assumes that one can develop a positive image of a destination just by being exposed to advertising which can produce motivation to visit without necessarily going through the Destination Awareness stage. There are three routes (1-3) through which individuals can end up exhibiting conversion behavior through the tracking model as compared to the conversion model. An additional route (0) was added to capture those individuals who didn't go through either the conversion model or tracking model stages, but indicated that their decision to travel was influenced by the advertising. This is illustrated in figure 6.

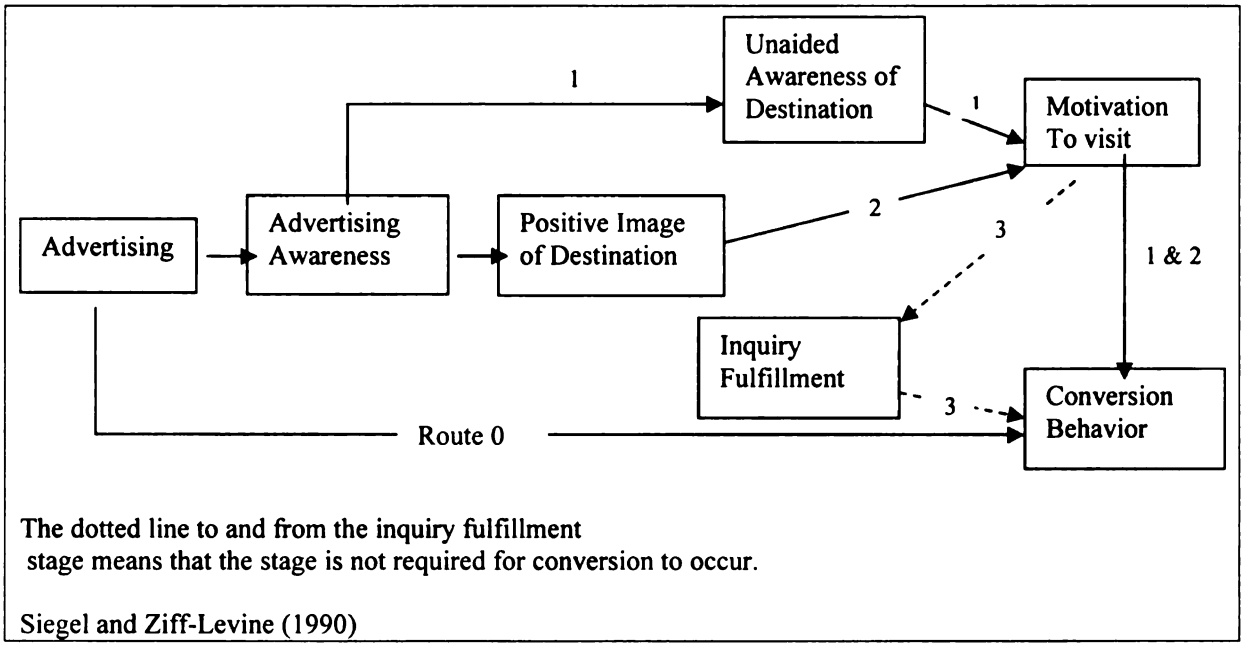

Figure 6: Advertising Tracking Model showing the different routes (0-3) used to calculate the conversion rates and ROI.

Travel Michigan's advertising effectiveness was also calculated using the tracking model. Only routes 1 and 2 above were used to calculate the conversion rates at this stage. Recall that only the third route requiring inquiry fulfillment was used in the conversion model.

The results from the tracking model illustrated in Figure 7 show that route 1 has an overall conversion rate of 5.2%. This route, though not as conservative as the conversion model, also requires that one goes through the Unaided Destination Awareness stage before developing motivation to visit. Route 2, however, gave the highest conversion rate simply because the route excludes both the Destination Awareness and Inquiry Fulfillment stages. The route presumes that one can develop motivation to travel and eventually visit the state only after having developed a positive image of the destination from exposure to advertisements. For this route, the three image variables were used and

three different conversion percentages were obtained. The analysis resulted in a different tracking model for the state's travel advertising as shown in Figure 7 below.

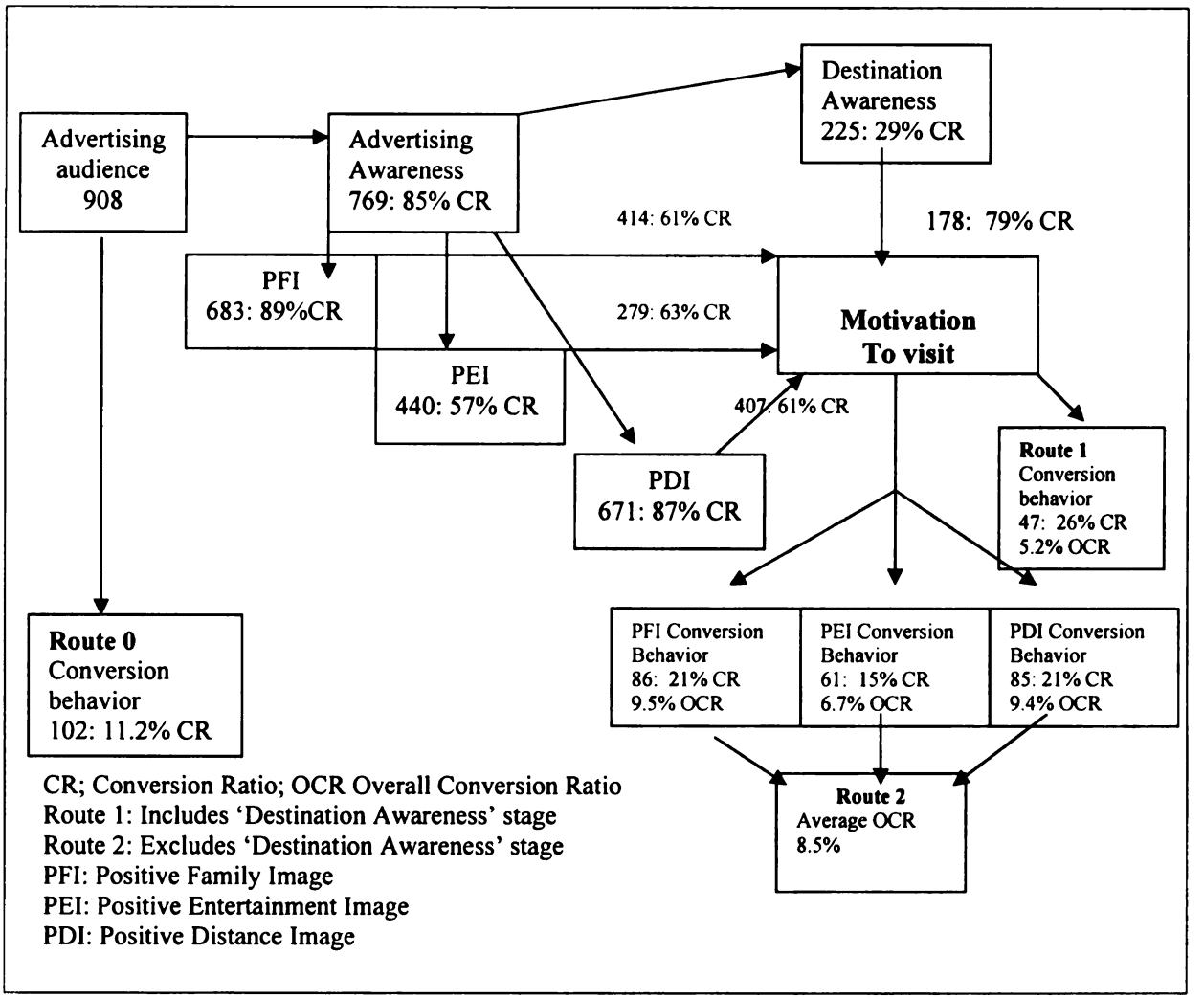

Figure 7: Advertising Tracking Model for Travel MI (Siegel and Ziff-Levine, 1990)

The results show the conversion rates for Travel Michigan advertising range from 2.2% using the conservative conversion model to 8.2% through route 2 of the tracking model and 11.2% through the straightforward route (0). While these results show that the percentage of people who were brought to the state as a result of the state's travel advertising, they do not say anything about the return on investment (ROI) of the

advertising campaign since neither accounts for sales in dollars or advertising costs in this analysis at this juncture. Determination of the ROI is the subject of the next stage of the analysis.

4.5 Return on Advertising Investment (ROI)

Return on advertising investment (ROI) was calculated for all the four routes illustrated earlier in Figures 5 and 6. ROI in this study refers only to government tax revenues captured from tourist activity. Calculating these figures was made possible by making use of several assumptions given below:

- It was assumed that the visitors from the three DMAs spend the same amount of money once they cross the MI borders into the state. The researcher was interested in the visitors' expenditures once they are in the state not before. Data on visitor expenditures and travel party size were obtained from the Household Surveys conducted by Michigan TTRRC.
- It was assumed that the advertising target population is the same as the population of the greater metropolitan areas of the three DMAs since 97% of all U.S households have cable and access to television, and an even bigger percentage have access to some form of media, be it radio magazine or newspaper (Neilsen Media Research, 2002). Only that proportion of the population over the age of 18 was used since it was the targeted population group.
- Population data were based on the 2000 census.

- The state gets approximately 8% of revenue through sales tax, lodging room tax and income taxes from tourism businesses and their employees. According to the research department of The Travel Industry Association of America (TIA) (2004) the state collects 5 cents out of every traveler spending dollar in taxes. Carr and Holecek (2003) estimated the state collects 10% of tourist expenditure in taxes. This study used 8%, an average of these two figures (5% and 10%), which translates to 6% from sales and room taxes and 2% from tourism businesses and their employees. The 8% figure was assumed to be an appropriate estimate of state tax collections in the absence of any better data.

The population figures for the greater metropolitan Chicago, Indianapolis and Cleveland are 9,650,137; 1,607,486 and 2,900,000 respectively. Since only those individuals above the age of 18 were considered only 7,044,600 (73%) of the Chicago population, 1,194,362 (74.3%) of the Indianapolis population and 2,073,500 (71.5%) of the Cleveland population belonged to the defined age category. The sum of the populations of the three DMAs was used for the calculation of the ROI. The calculations and results of the ROI analysis are presented in Table 18.

Table 18: ROI figures for the 2003 Travel Michigan Advertising Campaign (4 routes used)

Item	Route 0	Route 1	Route 2	Route 3
Population	10,312,462	10,312,462	10,312,462	10,312,462
Travel Party size	3.5	3.5	3.5	3.5
Ave. Expenditures/Party	US$947	US$947	US$947	US$947
Ave. Expend/individual (US$947/3.5)	US$271	US$271	US$271	US$271
Conversion Ratio (%)	11.2	5.2	8.5	2.2
Number of people converted (CR*population)	1,154,996	536,248	876,559	226,874
Revenue US$ (Converted people*Expend/individual)	313,003,847	145,323,215	237,547,562	61,482,898
State Revenue US$ (8% of Revenue)	25,040,308	11,625,857	19,003,805	4,918,632
Travel MI advertising costs for this campaign (US$)	2,392,062	2,392,062	2,392,062	2,392,062
ROI	1: 10.47	1: 4.86	1: 7.94	1: 2.06

Route 0: Straightforward route; Route 1: Tracking model route including 'Destination Awareness' stage; Route 2: Tracking model route excluding 'Destination Awareness' stage; Route 3: Conversion model route including 'Inquiry Fulfillment' stage.

These results show a positive return on advertising investment even for the conservative conversion model (route 3) which includes the inquiry fulfillment requirement. Through this route, Travel Michigan more than breaks even getting about US$2.06 for every dollar spent on advertising. Route 2 is the one that assumes that individuals can develop motivation to visit and visit after being exposed to the advert without necessarily having gone through the destination and inquiry fulfillment stages. This route gives an ROI value of 7.94 implying that there is a $7.94 return for every dollar spent on advertising. The ROI values range from 1: 2.06 for the most conservative route 3 to 1: 10.47 for the most liberal one (route 0). Either way, the state is getting more from advertising than it is spending, meaning that travel advertising is a worthwhile investment. It is also important to note that these analyses only include direct expenditures and net revenues, factoring in the multiplier effect or considering gross revenues would certainly give even higher conversion and ROI ratios. Such further analyses, however, are beyond the scope of this study. These results tend to justify spending of tax dollars on travel advertising and the

results are consistent with what other researchers have found. Mok (1991) found gross tourism advertising returns to range from 1:10 to 1:56 and concluded that there is considerable justification for using public resources in tourism advertising.

Chapter 5

5.0 Summary and Conclusion

The main object of this study was to determine the effectiveness of Travel Michigan's travel advertising campaign for the 2003 season in three DMAs: Chicago, Indianapolis and Cleveland. The study utilized different analyses in an effort to establish the effectiveness of the travel advertising campaign. First, comparisons were made between the pre and post campaign phases to note if there were any differences in advertising awareness between those interviewed before and after the campaign. The significant difference in advertising awareness found between these two groups of respondents was a good starting point for the study. It meant that the campaign had made that initial breakthrough of getting the attention of the audience that is required for advertising to be effective. Further analyses to determine the effectiveness of the campaign would not have been necessary had there been no differences in advertising awareness between respondents interviewed pre and post campaign. Getting attention and creating awareness are the first and certainly important stages in most of the communication models including both the old and newer models of communication. Today's consumers are exposed to not less than 1000 advertisements daily (Kotler, 1997), therefore, breaking through such clutter to gain the consumer's attention is a challenge for any advertiser. Just getting the consumer's attention is, however, not sufficient by itself. It is hoped that this stage will result in some more positive responses including, but not limited to: opinion change, attitude change, perception change, affect change and/or action change (Tan 1985).

Second, having established that the campaign was effective in getting the intended audience's attention, the analyses that followed were intended to determine if the campaign had any further effects beyond just getting attention. Effectiveness in this study was measured in several ways including: generating destination awareness, creating positive attitude toward the state as a tourism destination, generating motivation to visit the state and generating visits to the state. These measures were used based on the assumption that success in communication is shown in many ways as illustrated by the H-J-K Communication Persuasion Model introduced in Figure 1. It is especially important in tourism because it is a unique industry which relies much on word of mouth (Opperman, 2000); therefore, by generating destination awareness, positive perceptions and attitude towards a destination, an advert can be said to be effective since such people are likely to recommend the destination to others even if they have not visited it themselves. Furthermore, having positive attitudes and product awareness have been shown to be predecessors of action (Lavidge and Steiner, 1961; Haskins, 1964; Fishbein and Azjen, 1974; Tan, 1985; and Butterfield et. al., 1998). Those who are aware of advertising have greater levels of destination awareness, greater intention to visit the state, better attitudes towards the state as a tourism destination and are more likely to take a pleasure trip to the state than those who are not aware of advertising. Significant differences were found in visits to the state among those who were aware of advertising and those who were not.

While proponents of experiments and quasi-experiments might argue that this does not establish a causal relationship between advertising and results, it is important to note that the results drawn from the analyses reported herein were all highly and consistently significant at the $p < .001$ level. Also, Starch (1961) argues that when divided into those that recall and those who do not recall an advert, the differences between these two groups can be attributed to advertising. He also argues that typically those who recall advertisements buy more than those who do not. This argument, however, is not meant to undermine the importance of experiments in establishing true causal relationships, rather it is meant to offer support for the findings of this study. Those individuals who were aware of Michigan's travel advertising campaign consistently ranked Michigan higher as a good tourism destination than those who were not aware of the advertising. Similarly, those who were aware of the state's advertising had greater intention/motivation to visit the state and actually visited the state more than those who were not aware. Even though this study does not meet the requirements of an experiment, the consistency of the results can only imply that some credit belongs to the Travel Michigan advertising campaign.

Next, principal components analysis was conducted to reduce the attitude data as well as examine the grouping pattern of the different attitude variables. Three components resulted which represented three attitudes towards Michigan as a tourism destination. The first and most important attitude component was the Family Image factor which accounts for 34% of the variance in the rotated matrix. Next most important was the Entertainment Image factor representing 20% of the variance, followed by the Distance

Image factor which represented 12% of the variance. This result means that Michigan is viewed by consumers most importantly as a family destination and also as a close enough destination for short get away trips. This information is of particular importance to the state's destination marketers because it gives them a good idea about what the visitors are looking for in the destination, and therefore, helps them to craft their advertising messages to communicate those messages as well as develop destination attributes to meet the customers' needs.

Correlation analysis showed a positive relationship between attitudes of people towards the state as a tourism destination and advertising awareness, destination awareness and intention to visit the state. These results also show Michigan is most importantly viewed as a family tourism destination. Attitudes towards Michigan as a family destination were found to be highly and positively correlated to advertising awareness, destination awareness and intention to visit the state. As people's 'family destination' attitudes towards Michigan improve, so does their intention to visit the state. Also, as people's distance attitudes towards the state improve, so do their advertising awareness and intention to visit. Also, the relationship between DMA location and both destination awareness and intention to visit was negative. This means that people's awareness of Michigan as a tourism destination as well as their intention to visit the state both decrease as the DMA's distance from Michigan increases. Again, this highlights that the state of Michigan needs to also focus its attention on markets closer to home as people's preferences for short holidays increase. Recent world events such as 911 and the war have left people more inclined to take short trips to which they can drive rather than fly

and also which they feel they are secure. Travel Michigan, therefore, needs to take advantage of the situation and get short haul travelers to its destinations.

The fourth stage of analysis involved use of logistic regression to determine the factors affecting unaided advertising awareness (UAA) and destination awareness (DA). The results showed exposure to television advertising was the single most important predictor of unaided advertising awareness, followed in descending order by gender, experience, radio, level of exposure and age. Being female increased the probability of one recalling the advertisements, implying that females were more likely to recall the advertisements than their male counterparts. This is an important finding for destination marketers as it tells them that in designing their advertisements they need to include material that appeals to females since they are more likely to recall the advertisements when it comes to making decisions on which destinations to visit. Results from the previous stages of analysis show Michigan is a state that is ranked very highly as a family destination, so in its effort to attract two adult (male, female) families to the state Travel Michigan should mostly consider including advertisements that appeal to females. Women play a dominant role in the vacation destination selection process in the family (Mottiar and Quinn, 2004).

Having traveled to the state on a pleasure trip before was also a significant factor affecting advertising awareness. This finding collaborates Ehrenberg's (2000) claims that advertising's main role is to reinforce feelings of satisfaction for brands already purchased and that consumers mostly ignore advertising for brands they are not already using. This also agrees with the theory of cognitive dissonance which states that

individuals consciously avoid or attend to messages in an effort to reduce dissonance. By attending to advertisements of brands and/or products they have already purchased, consumers reinforce their decision and convince themselves that their decision was the right one, thereby reducing post-purchase dissonance. Having been exposed to radio advertisements, even though not as important as TV, also increased the probability of an individual recalling the advertisements. Also, the more an individual was exposed to advertising the more likely they were to recall the advertisements.

Experience was the single most important factor affecting destination awareness in the DA model, followed by web use, intention to visit and finally exposure to advertisements in that order. Having traveled in the state on a pleasure trip before increased the probability of an individual being aware of the state as a tourism destination. This is an important result for the state DMO because it also suggests that repeat visitors are important to the state's tourism industry. DA was measured by asking the respondents to name states and/or provinces that come to mind when they are thinking of taking a pleasure trip in the U. S. and Canada. Individuals who have experience traveling in the state on pleasure trips keep considering it for their future vacations, illustrates the importance of repeat business to the state's tourism industry. Michigan leisure and tourism providers, therefore, need to pay attention to their repeat visitors to the point of developing relationships and loyalty because repeat visitors are an especially important target market.

Web use was also an important factor affecting destination awareness. Those individuals who had visited the state's official travel and tourism web site were more aware of the state as a tourism destination than those who had not. This implies the state's travel and tourism web site is an important resource in generating awareness of the state as a tourism destination among potential visitors. Intention to visit the state was also significant, maybe because those with the intention to visit the state on a pleasure trip actively seek information resulting in them being more aware than those with no intention to take a pleasure trip to the state.

Exposure to advertisements was also a significant factor affecting destination awareness. The more individuals were exposed to advertisements the more they were aware of the state as a tourism destination. Assuming destination awareness was the goal of the advertising campaign, this result show there are positive returns to advertising. This study, however, does not show at what point this ceases to be true (i.e. when does increasing exposure stop increasing destination awareness?).

The fifth stage of analysis included calculations of real conversion ratios using four different approaches involving named routes (0-3) developed in this study. The first route was from the tracking model which includes the destination awareness stage. The second route was also from the tracking model, but excluded the destination awareness stage. The third route was from the conversion model which included the inquiry fulfillment stage, and the fourth route was the 'straightforward' route called route 0. Under the straightforward route (route 0) all respondents who indicated that they had visited the

state and that their visit was influenced by advertising were considered. These individuals needed not to have gone through all the other steps as depicted by the tracking and conversion models. The results ranged from a conversion ratio of 2.2% from the most conservative conversion model to 8.5% for the liberal tracking model route that excludes the destination awareness stage and finally 11.2% for the straightforward route. The straightforward route conversion rate was arrived at by simply considering those individuals who had traveled to the state on a pleasure trip and indicated that advertising influenced their decision to travel without necessarily having gone through the stages given by both the tracking and conversion models. The important result from the sixth and final ROI stage of analysis is that there is a positive return on advertising investment taking all the routes into consideration. The straightforward route yielded a liberal $10.47 return in state tax revenue collections on every dollar spent on advertising, route 1 from the tracking model including the destination awareness stage yielded a $4.86 return on every dollar spent on advertising, route 2 yielded a $7.94 ROI and finally route 3 from the conservative conversion model yielded a $2.06 ROI. It is important to note these figures are actually underestimates as they include only estimated tax revenue collections associated with projected direct expenditures.

In summary, the findings of this study reveal the positive effect of travel advertising on a number of important factors. The main weakness of the study that is most likely to be raised by the proponents of experiments is that, it fails to establish and ascertain causal relationships. However, the consistency of results given in the different stages of analysis conducted in this study stand to support that the advertising campaign had substantial

positive impacts. Results clearly showed that there were significant differences in destination awareness, intention to visit and actual visitation between those who were aware and those not aware of advertising. There were also significant differences among those aware and those not aware of advertising on the attitudes towards the state as a tourism destination. Those aware of advertising consistently ranked Michigan more highly as a desirable tourism destination than those not aware of advertising. Considering attitude change and destination awareness as prerequisites to visitation, Travel Michigan's advertising can be considered highly effective. The DA logistic regression model also shows that exposure to advertising is important in increasing one's chances of being aware of Michigan as a tourism destination. Finally, the conversion ratios and the ROI figures all show the effectiveness of the advertising campaign. So, even though the study is not an experiment, the consistency of the results clearly illustrate the importance of the travel advertising campaign.

Woodside (1990) advocates the use of experiments such as A-B or A-B-C splits in which two groups get a different treatment each and the other becomes a control group; and then compare the results from these two or three groups. As much as these are capable of producing the causal relationships among different variables, they are easier to contemplate than conduct, especially in our field of travel and tourism that relies heavily on word of mouth. For instance, how possible is it to run different television travel promotional programs targeting different groups in the same population without the possibility of treatment spillover from one treatment group to the next and even to the control (no treatment) group? This might be easy in a laboratory setting, but it is not so

simple to implement in real life situations. Quasi-experiments on the other hand, that have been advocated for and used by a number of researchers (Mok, 1990; Woodside et. al., 1997), though they are more practical than true experiments, have their own shortcomings. Quasi-experiments do not utilize random assignment of subjects between the treatment and control groups implying that the results can't entirely be accurately attributed to advertising alone. The resulting differences between the groups might result from initial differences before the treatment was administered. Given these shortcomings associated with the supposedly better methods, the important question remains: Is it really worth it to invest in more expensive and laborious methods when there is no guarantee that the outcome is any better than those obtained from cheaper and more practical methods? The answer partly lies in Messmer's and Johnson's (1993) conclusion that more testing of both conversion and alternative approaches is needed before conversion studies can justifiably be abandoned.

Future research, therefore, should focus more on comparing the results from the different methods including conversion studies, experiments and quasi-experiments to see if there are any great differences that warrant the complete abandonment of one method for another. Also, more work needs to be done in refining experiments and quasi-experiments to make them more practical and applicable to the travel and tourism field. This is important because for most DMOs, the problem is not about which is the best method to utilize, but is about whether or not there are enough funds to conduct any accountability research at all, especially considering the tight budget circumstances under which most of them operate. Investing in more expensive impractical methods with no

guaranteed clean results is not an option for them when there are other cheaper more practical alternatives. Unless other cheaper and more practical approaches than the current experiments are developed and tested, conversion studies remain that best viable alternative available.

5.1 Study Limitations

The main limitation of the study is the short lag time between the campaign and the post campaign phase. Pre-campaign data collection ended on the 1st of May 2003 and post-campaign data collection started on July 7. There was only two months in between the two phases during which the campaign was run. The period might not have been long enough for exposed individuals to respond to the advertisements. In the future, such studies should allow more time for full campaign effects to be recorded. The campaign effects delivered in this study, therefore, might be under-estimates of actual impacts. Underestimates are also probable since neither the possibility of the advertisements generating positive word of mouth or repeat visits over multiple years were included in the projections.

Another limitation of this study is that it did not filter out the effects of other independent campaigns that might have been running simultaneously with the state's campaign. Even though caution was taken to ensure that no other major campaigns were running in the three DMAs during that time, other Michigan tourism providers were not prohibited from running advertisements to promote their businesses, thereby creating an element of 'noise' for this particular study. There were no major advertising events taking place

during the time for this study in the three DMAs. Future studies of this sort should, therefore, account for and filter out the impact of other advertising. Future studies should also account for cumulative effect of advertising exposure.

The use of secondary data was also a limitation to this study. There are things that could have been done differently, had it been a primary research study. Placement of advertisement campaigns in the media would have been delayed to allow more pre-campaign interviews to be completed. Also, the timing of post campaign interviews would have been different. Consumers would have been allowed more reaction time, between exposure to advertisements and post campaign interviews.

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Appendix 1: Sample Questionnaire

Date: _____ Survey Number: 03-CL-2- _____
Time: _____ Interviewer: _____

Travel Michigan Market Survey

CLEVELAND DMA Awareness Study
(Do not read the list)

1. **When you are thinking about taking a pleasure trip in the UNITED STATES or CANADA what cities, states or provinces come to mind? Any others?**

First mention	Others	
[ ]	[ ]	California (Los Angeles, San Francisco, San Diego)
[ ]	[ ]	Florida (Orlando, Tampa, Jacksonville, Miami)
[ ]	[ ]	Hawaii
[ ]	[ ]	Illinois (Chicago)
[ ]	[ ]	Indiana (Indianapolis)
[ ]	[ ]	Michigan (Detroit, Traverse City, Mackinac)
[ ]	[ ]	Minnesota (Minneapolis/St. Paul, Bloomington [Mall of America])
[ ]	[ ]	New York
[ ]	[ ]	Ohio (Cleveland, Columbus, Cincinnati, Sandusky [Cedar Point])
[ ]	[ ]	Ontario (Toronto)
[ ]	[ ]	Wisconsin (Milwaukee, Green Bay, The Dells, Madison)
[ ]	[ ]	Other: _____, _____, _____

(Do not read the list)

2. Now thinking just about a pleasure trip in the MIDWEST, what cities or states come to mind? Any others?
(Do not read the list. Record answers in the first column below)

First mention	Others	
[ ]	[ ]	Illinois (Chicago)
[ ]	[ ]	Indiana (Indianapolis)
[ ]	[ ]	Michigan (Detroit, Traverse City, Mackinac)
[ ]	[ ]	Minnesota (Minneapolis/St. Paul, Bloomington [Mall of America])
[ ]	[ ]	Ohio (Cleveland, Columbus, Cincinnati, Sandusky [Cedar Point])
[ ]	[ ]	Wisconsin (Milwaukee, Green Bay, The Dells, Madison)
[ ]	[ ]	Other: _____, _____, _____

3. For which states or provinces do you recall seeing or hearing any vacation or travel advertising in the past 6 months?
(Read each state NOT checked in the first column. Record responses in the columns on the right column)

4. Do you recall seeing or hearing any vacation or travel advertising for ... in the past 6 months?

	3. Do not read the states	4. Read the remaining states	
Illinois	[ ]	Yes	No
Indiana	[ ]	Yes	No
Michigan	[ ]	Yes	No
Minnesota	[ ]	Yes	No
Ohio	[ ]	Yes	No
Ontario	[ ]	Yes	No
Wisconsin	[ ]	Yes	No
Other (specify)	[ ]	Do not ask "other"	
None	[ ]		

If a respondent DID NOT MENTION any MICHIGAN advertising in question 3 or 4, GO TO QUESTION 10.

5. You mentioned that you saw or heard vacation or travel advertising for the State of Michigan in the past 6 months. Please describe that advertising to me. What did it say or show? [ ] –(-99) (Do not read) Don't know

---

6. In your opinion, what ideas or messages was Michigan trying to communicate in this advertising? [ ] –(-99) (Do not read) Don't know

---

7. Approximately, how many times have you seen or heard Michigan travel advertising in the past 6 months?

times _____ [ ] –(-99) (Do not read) Don't know

If "zero" go to question 10.

(Read the list)

8. Did the information you saw or heard on Michigan have ...

[ ] –1 ... a primary influence on your decision to travel to Michigan

[ ] –2 ... a partial influence on your decision
[ ] –3 ... no influence on your decision
[ ] –4 (Do not read) Did not visit Michigan
[ ] –(-99) (Do not read) Don't know

(Read the list)

9. Compared with other states and provinces would you say you have seen ...
[ ] –1 Much more advertising for Michigan
[ ] –2 Somewhat more advertising for Michigan
[ ] –3 About the same
[ ] –4 Somewhat less advertising for Michigan
[ ] –5 Much less advertising for Michigan?
[ ] –(-99) (Do not read) Don't know

10. What do you think is the Internet address for the state of Michigan's official tourism web site? [ ] –(-99) Don't know

---

11. Do you have access to the Internet?

[ ] –1 Yes
[ ] –2 No => Go to question 17.

12. Have you used the Internet for travel planning purposes in the past 12 months?

[ ] –1 Yes
[ ] –2 No => Go to question 16.

13. Have you made a travel-related purchase over the Internet in the past 12 months?

[ ] –1 Yes [ ] –2 No

14. In the past 12 months, how often, if at all, have you visited the state of Michigan's official tourism web site to obtain Michigan travel information?

times _____ [ ] –(-99) Don't know

=> Go to question 16.

If "zero" => Go to question 16.

(Do not read the list, unless respondent is unable to give a specific answer). How did you access it?

[ ] –1 Typed in the web site address
[ ] –2 Used a search engine (search program) to find it
[ ] –3 Used the bookmark from previous use(s)
[ ] –4 Clicked on the link on another web site
[ ] –(-99) Don't know

(Read the list)

16. In the next 12 months, how likely is it that you will visit the state of Michigan's official tourism web site to obtain Michigan travel information?

[ ] –1 Very likely
[ ] –2 Somewhat likely
[ ] –3 Somewhat unlikely
[ ] –4 Very unlikely
[ ] –(-99) (Do not read) Don't know

17. Have you used a State of Michigan toll-free phone number to inquire about travel information?

[ ] –1 Yes
[ ] –2 No
[ ] –(-99) Don't know

ADVERTISING BLOCK

Now I'd like to ask you some specific questions about vacation or travel advertising for the State of Michigan that you MAY or MAY NOT have seen or heard in the past 6 months. For each description I read, please tell me whether or not you have seen or heard that advertising.

(Read ALL the descriptions). TV Advertising

18. Have you seen advertising on TELEVISION for the State of Michigan in the past 6 months that... .?

... showed a girl talking about her vacation trip to Detroit and attractions she visited there. The ad ended with the "Great Lakes. Great Times." logo, and gave the Michigan.org web address for more information.	Yes	No	Don't Know

(Read ALL the descriptions). Magazine Advertising

19.

Have you seen similar advertising for the State of Michigan in the past 6 months in a MAGAZINE?	Yes	No	Don't Know

(Read ALL the descriptions). Radio Advertising

21.

Have you heard a similar ad on RADIO?	Yes	No	Don't Know
Have you heard RADIO advertising for the State of Michigan in the past 6 months that... .?			
... had a boy describing his vacation in Frankenmuth swimming in an indoor pool, visiting a Christmas land and having his tooth come out. The ad ended with the "Great Lakes. Great Times." logo, and gave the Michigan web site for more information.	Yes	No	Don't Know
... had a boy talking about his fun family vacation in Michigan, swimming, fishing, going on a glass-bottom boat. The ad ended with the "Great Lakes. Great Times." logo, and gave the Michigan web site for more information.	Yes	No	Don't Know
... had a child during a show-and-tell presentation for his classmates showing memorabilia that his parents brought back from Michigan. The ad ended with the "Great Lakes. Great Times." logo, and gave the Michigan web site for more information.	Yes	No	Don't Know

22. Direct Mail Advertising.

23. Internet Advertising.
(Read the list)

24. Using a 5-point scale where "1" means you "disagree completely", and "5" means you "agree completely", please tell me how well, you think, each statement describes MICHIGAN as a vacation destination.

___ Michigan is a great place to escape from my daily routine
___ Michigan is great for short getaway trips
___ Michigan has great beaches
___ Michigan is great for enjoying quality time with family or friends
___ Michigan is a great place to relax and unwind
___ There is plenty for me to see and do on a Michigan getaway trip
___ Is close enough for a weekend getaway
___ Is great for summer outdoor recreation activities
___ Is an exciting place to visit
___ Has a lot of high quality lodging
___ Offers much scenic appeal
___ Is great for winter outdoor recreation activities
___ Is a good place to meet friendly people
___ Offers exciting nightlife and entertainment
___ Is a great place for a family vacation
___ Has many interesting historic sites
___ Offers an excellent vacation value for the money
___ Has great shopping opportunities
___ Has lovely small towns
___ Has great restaurants

25. In the past 12 months, how many times, if any, have you traveled in Michigan on a pleasure trip?

times _____ 0 – None

26. Do you have specific plans to take a pleasure trip in Michigan in the next 12 months?

[ ] –1 Yes => Go to question 28.
[ ] –2 No

(Read the list)

27. How likely is it that you will take a pleasure trip in Michigan during the next 12 months?

[ ] –1 Very likely
[ ] –2 Somewhat likely
[ ] –3 Somewhat unlikely
[ ] –4 Very unlikely
[ ] –(-99) (Do not read) Don't know

To conclude, we'd like to ask just a few questions to help us classify your answers.

28. What is your age? _____ [ ] –(-55) Refused

29. (DO NOT ask) Gender: [ ] –1 Male [ ] –2 Female

(Do not read the list)

30. What is the highest level of school that you have completed?

[ ] –1 Elementary or less
[ ] –2 Some high school
[ ] –3 High school graduate
[ ] –4 Some college
[ ] –5 College graduate
[ ] –6 Graduate / professional
[ ] –7 Vocational or technical school
[ ] –(-55) Refused
[ ] –(-99) Don't know

31. Including yourself, how many people live in your household? # _____

32. How many children under the age of 18 live in your household? # _____

(Do not read the list. Enter exactly what the respondent says.)

33. What is your current occupation?

1=Professional/technical
2=Managerial
3=Sales
4=Clerical
5=Construction
6=Craftsman
7=Operative
8=Transportation perative
9=Labor
10=Personal service
11=Retired
12=Unemployed
-55=Refused
-99=DK

34. What is your zip code? _____
[ ] –(-55) Refused [ ] –(-99) Don't know

35. What racial or ethnic group do you belong to?
[ ] –(-55) Refused [ ] –(-99) Don't know

36. The median household income is $42,000. Would you say your total household income before taxes in 2001 was above or below the median?

[ ] –1 Above the median
[ ] –2 Below or at the median => Go to question 38.
[ ] –(-55) Refused => Go to question 38.
[ ] –(-99) Don't know => Go to question 38.

37. Was your total household income above $75,000?

[ ] –1 Yes
[ ] –2 No
[ ] –(-55) Refused
[ ] –(-99) Don't know

38. Thank you for your time and have a great day / evening.

Appendix 2: Description of the advertisements by channel and DMA

Advertisement description	DMA of the advertisement	Channel through which the advertisement was run.
1. … showed a boy talking about his fun family vacation in Michigan, lighthouses, lakes and beaches and playing in the sand with his sister. The ad ended with the "Great Lakes. Great Times." logo, and gave the Michigan.org web address for more information.	Chicago Indianapolis	TV, Magazine
2. …had a girl talking about an island on the lake, ferry ride, and carriage rides. The ad ended with the "Great Lakes. Great Times." logo, and gave the Michigan web site for more information.	Chicago.	Radio
3…. showed a girl talking about building a sand castle and playing in the sand with her brother on a Michigan beach. The ad ended with the "Great Lakes. Great Times." logo, and gave the Michigan web site for more information.	Chicago Indianapolis	TV, Magazine
4…. had a boy talking about camping at the Sleeping Bear Dunes, running down the sandy hills, jumping into a lake, and visiting old ships. The ad ended with the "Great Lakes. Great Times." logo, and gave the Michigan web site for more information.	Chicago Indianapolis	Radio
5…. had a boy talking about his vacation in Michigan's Upper Peninsula, visiting huge waterfalls and seeing old shipwrecks. The ad ended with the "Great Lakes. Great Times." logo, and gave the Michigan web site for more information.	Chicago Indianapolis	Radio
6…. showed two girls at the ferry dock to Mackinac Island, Michigan, talking about a boatload of family fun … on the island. The ad ended with the "Great Lakes. Great Times." logo, and gave the Michigan web site for more information.	Chicago	Magazine

Appendix 2 continued

7.... had a boy talking about staying at a Michigan resort and riding horses with his sister. The ad ended with the "Great Lakes. Great Times." logo, and gave the Michigan web site for more information	Chicago	Radio
8.... showed two boys in goggles on the beach and mentioned a poem about Sleeping Bear Dunes. The ad ended with the "Great Lakes. Great Times." logo, and gave the Michigan web site for more information.	Chicago	Magazine
9.... had a child during a show-and-tell presentation for his classmates showing memorabilia that his parents brought back from Michigan. The ad ended with the "Great Lakes. Great Times." logo, and gave the Michigan web site for more information.	Chicago Indianapolis Cleveland	Radio
10... had a girl talking about her vacation trip to Detroit, and attractions she visited there. The ad ended with the "Great Lakes. Great Times." logo, and gave the Michigan web site for more information.	Indianapolis Cleveland	Radio: Indianapolis TV, Magazine: Cleveland
11... had a boy describing his vacation in Frankenmuth swimming in an indoor pool, visiting a Christmas land and having his tooth come out. The ad ended with the "Great Lakes. Great Times." logo, and gave the Michigan web site for more information.	Cleveland	Radio
12... had a boy talking about his fun family vacation in Michigan, swimming, fishing, going on a glass-bottom boat. The ad ended with the "Great Lakes. Great Times." logo, and gave the Michigan web site for more information.	Cleveland	Radio

Sandage, C. H. and V. Fryburger. 1963. Advertising Theory and Practice. Homewood,

Appendix 3: Descriptive Statistics by DMA

Variable	Chicago		Cleveland		Indianapolis		Total
	Number	%	Number	%	Number	%	
Age	45	-	47	-	47	-	46
Gender: Female	222	32.2	229	33.2	238	34.5	689
Male	134	31.5	146	34.3	146	34.3	426
Education							
Elementary	2	40	2	40	1	20	5
Some High School	6	42.9	2	14.3	6	42.9	14
High School Graduate	66	24.7	99	37.1	102	38.2	267
Some college	77	32	83	34.4	81	33.6	241
College Graduate	127	36.2	111	31.6	113	32.2	351
Graduate//Professional	69	34.7	64	32.2	66	33.2	199
Technical school	4	18.2	10	45.5	8	36.4	22
Number of people in H. Hold							
1	57	32.9	57	32.9	59	34.1	173
2	118	29.8	136	34.4	141	35.7	395
3	57	28.7	69	34.8	72	36.4	198
4	69	36.9	61	32.6	57	30.5	187
5	40	37.7	33	31.1	33	31.1	106
6	4	16	10	40	11	44	25
7	2	22.2	3	33.3	4	44.4	9
8	1	50	0	0	1	50	2
9	0	0	1	50	1	50	2

Appendix 3 contd.

10	1	100	0	0	0	0	1
Number of children under 18							
0	229	33.3	225	32.8	233	33.9	687
1	53	30.5	58	33.3	63	36.2	174
2	48	31.6	55	36.2	49	32.2	152
3	18	28.1	21	32.8	25	39.1	64
4	3	23.1	6	46.2	4	30.8	13
5	0	0	0	0	4	100	4
6	0	0	1	50	1	50	2
Annual H. Hold income							
</= median ($42K)	62	23.5	224	38.2	101	38.3	264
> $45K but < $75K	172	32.3	101	33.2	184	34.5	533
> $75K	124	38.8	325	30.3	99	30.9	320
Racial/ethnic group							
Asian/Pacific Islander	11	78.6	1	7.1	2	14.3	14
Black/A. American	23	33.8	23	33.8	22	32.4	68
Hispanic	15	83.3	3	16.7	0	0	18
White/Caucasian	278	29.8	321	34.4	333	35.7	932
Multi-racial	3	33.3	3	33.3	3	33.3	9
Other	5	25	6	30	9	45	20

Appendix 4: Test for Appropriateness of data set for factor analysis

KMO and Bartlett's Test

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		.968
Bartlett's Test of Sphericity	Approx. Chi-Square	7020.503
	df	231
	Sig.	.000