

Economic Impact and Contribution of *Arizona Highways Magazine* to State Tourism

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16. Abstract To determine the influence that <i>Arizona Highways Magazine (AHM)</i> and its branded products have on tourism and the economy in Arizona, this study examined the influence of the <i>AHM</i> brand—the magazine, its related retail products, television program, and Facebook page—on tourism to and within Arizona; determined trip characteristics of Arizona travelers influenced by <i>AHM</i> -related products and services; and estimated <i>AHM</i> 's economic impact on travel. Several survey efforts collected travel and spending data that were analyzed with IMPLAN software. Focus groups conducted with television viewers provided additional information. Responses showed that <i>AHM</i> , its products, Facebook page, and television show collectively have a significant impact on the decisions to travel to and in Arizona. The <i>AHM</i> brand increased interest in traveling in the state and informed travel decisions. Based on data from <i>AHM</i> survey respondents, <i>AHM</i> -influenced travel made a substantial economic impact throughout the state; visitor spending—by out-of-state subscribers, Arizona subscribers, and <i>AHM</i> shoppers—was extrapolated to have contributed millions of dollars to state and local income tax and supported industries such as lodging, restaurants, and retailers. Estimated visitor expenditures supported 628 Arizona jobs. The minimum benefit/cost ratio of the magazine was calculated at 3.74:1, so for every dollar spent by <i>AHM</i> , at least \$3.74 enters Arizona's economy from out-of-state subscribers due directly to the magazine.					
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SI* (MODERN METRIC) CONVERSION FACTORS

APPROXIMATE CONVERSIONS TO SI UNITS

Symbol	When You Know	Multiply By	To Find	Symbol
LENGTH				
in	inches	25.4	millimeters	mm
ft	feet	0.305	meters	m
yd	yards	0.914	meters	m
mi	miles	1.61	kilometers	km
AREA				
in ²	square inches	645.2	square millimeters	mm ²
ft ²	square feet	0.093	square meters	m ²
yd ²	square yard	0.836	square meters	m ²
ac	acres	0.405	hectares	ha
mi ²	square miles	2.59	square kilometers	km ²
VOLUME				
fl oz	fluid ounces	29.57	milliliters	mL
gal	gallons	3.785	liters	L
ft ³	cubic feet	0.028	cubic meters	m ³
yd ³	cubic yards	0.765	cubic meters	m ³
NOTE: volumes greater than 1000 L shall be shown in m ³				
MASS				
oz	ounces	28.35	grams	g
lb	pounds	0.454	kilograms	kg
T	short tons (2000 lb)	0.907	megagrams (or 'metric ton')	Mg (or 't')
TEMPERATURE (exact degrees)				
°F	Fahrenheit	5 (F-32)/9 or (F-32)/1.8	Celsius	°C
ILLUMINATION				
fc	foot-candles	10.76	lux	lx
fl	foot-Lamberts	3.426	candela/m ²	cd/m ²
FORCE and PRESSURE or STRESS				
lbf	poundforce	4.45	newtons	N
lbf/in ²	poundforce per square inch	6.89	kilopascals	kPa

APPROXIMATE CONVERSIONS FROM SI UNITS

Symbol	When You Know	Multiply By	To Find	Symbol
LENGTH				
mm	millimeters	0.039	inches	in
m	meters	3.28	feet	ft
m	meters	1.09	yards	yd
km	kilometers	0.621	miles	mi
AREA				
mm ²	square millimeters	0.0016	square inches	in ²
m ²	square meters	10.764	square feet	ft ²
m ²	square meters	1.195	square yards	yd ²
ha	hectares	2.47	acres	ac
km ²	square kilometers	0.386	square miles	mi ²
VOLUME				
mL	milliliters	0.034	fluid ounces	fl oz
L	liters	0.264	gallons	gal
m ³	cubic meters	35.314	cubic feet	ft ³
m ³	cubic meters	1.307	cubic yards	yd ³
MASS				
g	grams	0.035	ounces	oz
kg	kilograms	2.202	pounds	lb
Mg (or 't')	megagrams (or 'metric ton')	1.103	short tons (2000 lb)	T
TEMPERATURE (exact degrees)				
°C	Celsius	1.8C+32	Fahrenheit	°F
ILLUMINATION				
lx	lux	0.0929	foot-candles	fc
cd/m ²	candela/m ²	0.2919	foot-Lamberts	fl
FORCE and PRESSURE or STRESS				
N	newtons	0.225	poundforce	lbf
kPa	kilopascals	0.145	poundforce per square inch	lbf/in ²

*SI is the symbol for the International System of Units. Appropriate rounding should be made to comply with Section 4 of ASTM E380.
(Revised March 2003)

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Introduction

Study Objectives

The purpose of this research project was to determine the impact of *Arizona Highways Magazine (AHM)* and its related branded products on tourism and the economy in Arizona. Specifically, this study examined the influence of the *Arizona Highways Magazine* brand—including the magazine, its related retail products, television program, and Facebook page (social media)—on tourism to and within Arizona. It also determined trip characteristics of Arizona travelers influenced by *AHM*-related products and services and estimated *AHM*'s economic impact on travel.

Arizona Highways Magazine Background

Arizona Highways Magazine was initially published in July 1921 by the Arizona Highway Department (now the Arizona Department of Transportation) as a brochure to "further the development of good roads throughout the state" (Cooper 1974). In 1925, it was launched in a true magazine format featuring travel stories and scenic photographs. Although published in black and white, the magazine captured the unique beauty that Arizona is known for. The magazine's focus, however, remained on the quality and expansion of road-building projects. It wasn't until 1937 that *Arizona Highways Magazine* shifted its orientation away from highway construction to showcasing the beauty and diversity of the Arizona landscape. *AHM* became a pioneer in color printing technology, and introduced its first color photographs in the December 1940 issue.

Although *AHM* is part of the Arizona Department of Transportation (ADOT), it does not receive state funding. Instead, it is financially self-reliant, similar to a private business, with a total annual budget of about \$4.7 million. *AHM* receives revenue from magazine subscriptions, newsstand sales, retail products, and miscellaneous sources. While known primarily for the magazine, *AHM* also maintains a website, publishes books and calendars, and offers other Arizona-related products for sale. It is also associated with *Arizona Highways Television* (also called *Arizona Highways TV*), a locally produced, syndicated television program dedicated to highlighting the history, culture, and uniqueness of Arizona. The product of a partnership with a private media producer, the show premiered in 2004. The show airs in the Phoenix, Tucson, and Yuma television markets. Some episodes are also available on YouTube.

Studies conducted in 2005 and 2012 found *Arizona Highways Magazine* to be an influential source of travel information for subscribers (Andereck and Ng 2005; Andereck 2012). The magazine's high standards of photography and editorial excellence are evidenced not only by a loyal subscriber base, but also by the recognition from peer organizations such as the International Regional Magazine Association. Today, *Arizona Highways Magazine*'s monthly circulation surpasses 136,000 copies, with readers in all 50 states and in two-thirds of the world's countries.

Tourism and Travel-Related Information

It is becoming increasingly important to tourism marketing managers to understand tourists' decisions to purchase specific tourism products or services (Jun et al. 2007). The field of consumer behavior centers on searching for and acquiring information that is used to make a decision about purchasing a product. The process encompasses several stages: searching for information, purchasing a product or service, using a product, evaluating a product, and disposing of the product or service (Moutinho 1987). One of the major factors influencing consumer decisions is information sources about the product or service of interest (Yacout and Hefny 2015).

Social media has become a major factor in terms of both information gathering and travel planning. A large number of online travel agencies offer travelers the ability to book hotels, rent automobiles, and purchase plane and railroad tickets. Eighty-nine percent of millennials plan travel activities based on online content posted by their peers (Carnoy 2017). In addition to trip planning, social media can play an important role in influencing travel decisions. One of the most extensive uses of social media for travelers is sharing photos and stories about their trips. Fifty-two percent of Facebook users said that their travel plans were influenced by a friend's travel photos (Social Samosa 2014).

Travel destinations, like products and companies, are brands. They work to define themselves in a way that makes them attractive, relevant, and competitive—and at a fraction of the investment of corporate brands. A strong destination brand is essential to stand out in a crowded, competitive, and diverse marketplace (U.S. Travel Association 2018). To meet one of the ultimate requirements of a successful destination marketing strategy, the region must be able to present a unique identity to potential visitors (Morgan and Pritchard 2005).

Establishing a clear market position and strong destination image in the minds of tourists is considered essential for destinations to gain top-of-mind awareness (Crockett and Wood 1999; King 2002). A strong destination brand may do more than build awareness; it may engender an affinity that can lead to more visitors, and by attracting businesses and talent, it may help to create a thriving community (U.S. Travel Agency 2018). Destination image (one of the components of destination branding) influences tourists' behavior before and after they visit the destination. Defining a destination's image requires clearly identifying and communicating what is unique about the region's tourism experience.

Tourism is increasingly recognized as a primary economic driver in all countries (Middleton et al. 2009). Tourism destinations are becoming competitive as more and more destinations look at tourism as the new economic generator, replacing activity in agriculture, mining, and manufacturing (Goeldner and Ritchie 2007). As a job creator, tax revenue generator, and destination storyteller, travel has ripple effects that touch the lives of millions of Americans. Tourism creates direct and indirect jobs in hotels, restaurants, consulting, transportation, and training; it increases tax revenues; and it helps the exporting of local products (Kotler et al. 1996). Travel-related tax revenues are pure profit, generated by visitors who do not require many of the essential public services of a destination. Without the tax revenue from travel, community residents would shoulder a higher tax burden to pay for services, education,

infrastructure, and more. On average, every \$1 million in travel goods and services sales directly support eight jobs. In contrast, on average, five jobs are directly supported by every \$1 million in sales in other industries.

Economic Impact and Economic Contribution

Because *AHM* is often used for making travel decisions that lead to taking trips and spending money, it contributes to the overall economic effect of tourism in the state. *AHM* subscribers, *AHM* shoppers, *AHM* Facebook page users, and *Arizona Highways Television* viewers contribute to state and local tax income and are responsible for supporting industries such as lodging, restaurants, retailers, service stations, and cultural centers. This chapter defines and explores the economic effects that *AHM*-inspired tourism has on Arizona's economy.

Defining Economic Contribution and Impact

Economic effects of tourism on an economy can be reported two ways: economic *contribution* and economic *impact*. Economic *contribution* includes expenditures by both local and non-local visitors. It can measure the regional magnitude and importance of tourism's total contribution to the regional economy. Economic *impact* excludes local visitors, thereby reporting net changes in the regional economy caused by money coming from outside the area. It is used to measure the inflow of spending by non-local visitors. The assumption is that, if local visitors did not take a trip, they would spend their money in the local region in a different way (Hjerpe 2018; Souza et al. 2019).

Economic impact excludes local visitors, reporting net changes caused by money coming from outside an area.

Local versus non-local visitors can be defined in a number of ways, but normally non-local visitors are considered people who live outside of the defined regional economy, whether a county, multiple counties, or a whole state (Hjerpe 2018). Because the economy being analyzed in this study is the state of Arizona, non-local visitors are those from outside Arizona.

Using IMPLAN Software

The total economic effects of *AHM* account for direct, indirect, and induced spending (multiplier effect) as calculated using IMPLAN modeling software. IMPLAN is currently the most commonly used software to determine economic impacts of recreation and tourism activities in the United States. The software uses an input/output modeling technique to understand how a local economy functions and the economic benefits of tourism and recreation activities/facilities. The currently available IMPLAN modeling system uses 535 distinct sectors and can offer a summary of economic impacts in terms of changes in jobs, household income, tax impacts, and gross regional product as new expenditures are injected into the economy.

The economic impact of visitor and retained local expenditures in recreation and tourism comprise direct, indirect, and induced impacts (Hjerpe 2018; Souza et al. 2019):

- *Direct impacts* refer to money a tourism enterprise receives directly through user fees, hotel rooms, rental cars, souvenir or gift shops, snack shop sales, and so forth. It is in essence the money directly spent by the tourists in the destination on lodging, food, attractions, and other businesses.
- *Indirect impacts* happen when a business or organization uses the direct money it receives to buy goods needed to operate from other businesses in the local region. For example, souvenirs purchased from another company to then sell, food and beverage or office supplies purchased from other companies or shops, building/site maintenance or operation expenses (tools purchased from outside the attraction), and so forth are considered indirect impact. This means that a tourism business or organization generates indirect benefits for their suppliers. If these suppliers belong to the local region, then the secondary/indirect expenditures accrue to the local region. If suppliers are based outside the local or host region, then most of the money will be *leaked* out. This *leakage* is captured by *multipliers* where the higher the multiplier the lower the leakage and vice versa (Gunthar, Parr, Graziano & Carstensen 2011; Munn, Hussain, Spurlock & Henderson 2010; The Trust for Public Land 2010).
- *Induced impacts* occur when an organization hires employees through the direct (or indirect) economic benefits, and these employees spend their income in the local region, such as on groceries, housing, utilities, sports, etc. While these induced jobs and earnings are not “directly” earned from tourism, they are at least in part earned because of the ripple effects of tourism earnings somewhere down the line.
- *Total impacts* are the sum of direct, indirect, and induced effects.
- *Multipliers* help to show direct, indirect, and induced impacts as a result of visitor spending. Multipliers improve the accuracy of economic impact studies by calculating how the initial expenditures injected in the region can spur additional/indirect purchases of goods and services to meet demand for tourism products. They are a ratio of total effects to direct effects.

The economic effects of visitor spending on local economies are estimated by multiplying visitor spending by regional economic multipliers. Four types of economic impacts are calculated (Greenwood and Vick 2008; IMPLAN 2014; McGrath et al. 2016):

- *Output* is the total dollar value of production or the sales of business in the region except for production and manufacturing costs of goods sold.
- *Employment* refers to the annual average number of full-time equivalent jobs. This includes self-employed, hourly, and salaried employees, as well as people in full-time, part-time, and seasonal jobs, based on a count of full-time/part-time averages over 12 months.
- *Value Added* is the combination of labor income, other property type income, and indirect business taxes. Value added accounts for all non-commodity payments associated with an industry’s production. Value added is usually the preferred measure of contribution to a state’s economy.
 - *Labor Income* is composed of two components: employee compensation and proprietor income. From the point of view of a business, employee compensation is the total cost of

labor, including wages and salaries, other labor-related income like health and retirement benefits, and both employee and employer contributions to social security. Proprietor income is the total income to a sole proprietor or self-employed employee (a sub-component of value added but presented separately because it represents the total payroll costs).

- *Other property type income* includes corporate profits, interest income, and rental payments.
- *Indirect business taxes* are taxes collected by businesses on behalf of the government. These include sales tax, excise tax, property tax, fees, fines, and licenses.
- *Tax Impacts* are categorized as federal and state/local taxes collected. The IMPLAN software does not break out state taxes from county taxes in a region, but if the impact region is local, then state/local tax implies local tax contributions and jobs.

With regard to visitor spending, three key pieces of information are required to estimate economic effects (Souza et al. 2019; Stynes et al. 2000):

- Number of visitors from other states who visit Arizona on overnight trips and overnight visits by residents in a one-year time period.
- Visitor spending patterns in Arizona.
- Regional economic multipliers that describe the economic effects of visitor spending in the local area (these are considered in the IMPLAN software).

Analyzing AHM's Influence on Travel

The economic impact analysis uses spending and travel behavior data to ascertain visitor spending in Arizona, revenue generation for local businesses, support of local jobs, and income increases in Arizona. This study used three data collection efforts—a subscriber survey, an *AHM* shopper survey, and an *AHM* Facebook page user survey—and information collected from focus groups of *Arizona Highways TV* viewers. Determining the annual impact of the *AHM* brand is complicated because multiple data types beyond spending and visitation data are required. These include the average number of visits in a year per travel party, as most visitors take multiple trips, and the extent to which visits can be directly attributed to the brand. Attribution must be considered when extrapolating sample estimates (survey results) to a larger population of all subscribers and shoppers (Hjerpe 2018). Expenditures can only be attributed to *AHM* if the visit was directly due to *AHM* as the information source. Average visits per year and percent of those visits influenced by *AHM*, *AHM* products, or *AHM*'s Facebook page for the most recent trip are extrapolated to the entire population.

Spending data were self-reported by survey respondents within several categories for the most recent overnight visit to/in Arizona in the past 12-month period. In addition, *AHM* Arizona subscribers and *AHM* shoppers who took day trips in the state reported the amount of money they spent on their most recent in-state trip. Travel behavior was also self-reported by respondents.

The data elements used to estimate these inputs and the resultant economic effects are described as follows. A travel party is defined as a group of people traveling together and sharing expenses (e.g., a family). Party days/nights are defined as the number of days (for day trips) and the number of nights (for overnight trips) that parties spent visiting Arizona.

Visitors are divided into the following distinct visitor segments to help explain differences in spending across user groups and economic impact versus economic contribution:

- Overnight visitors from Arizona
- Overnight visitors from other states/countries
- Day-trippers from Arizona

Visitor spending is broadly broken into 10 categories:

- Lodging (hotel, resort, etc.)
- Camping
- Entertainment and recreation (including entry fees)
- Grocery
- Restaurants
- Arts and crafts
- Other shopping
- Vehicle rental
- Vehicle fuel
- Vehicle repair

Additional data used include:

- Percent of subscribers/*AHM* shoppers/*AHM* Facebook page users who took trips to/in Arizona
- Average annual overnight trips to/in Arizona
- Average annual day trips in Arizona
- Percent of trips influenced by *AHM* or related products

Economic Findings

This study shows that *Arizona Highways Magazine* and its related branded products, the *Arizona Highways Magazine* Facebook page, and *Arizona Highways Television* do an effective job of promoting the state of Arizona to subscribers, shoppers, social media users, and viewers.

Data Collection Efforts

Overall results of this study are based on the economic analysis of three data collection efforts: a subscriber survey, an *AHM* shopper survey, and an *AHM* Facebook page user survey. Information was also collected from focus groups of *Arizona Highways TV* viewers. For more details on data collection, see the Methods section. Because the survey of *AHM* Facebook page users was a convenience sample (not random and therefore not representative), results cannot be generalized beyond the people who replied to the survey and are therefore not included in the IMPLAN models. The focus group information was also not part of the IMPLAN economic analysis.

Summary of AHM’s Economic Contribution and Impact

As noted above, economic contribution includes data from both local and non-local visitors. The total direct spending of respondents to the subscriber and *AHM* shopper surveys was extrapolated to be approximately \$43.1 million (Figure 1). This total comprises \$15.2 million spent on lodging and camping; \$11.7 million spent on food and beverages; \$6.7 million spent on shopping; \$3.3 million spent on entertainment and fees; and \$6.2 million spent on vehicle costs.

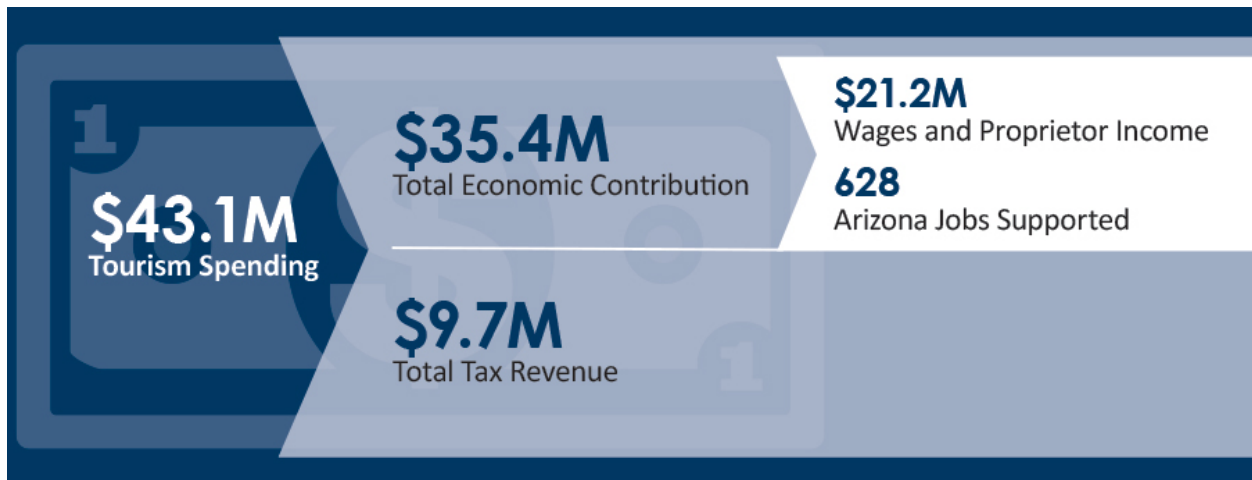


Figure 1. Estimated Annual Economic Contribution of AHM

The proportion of direct spending to economic contribution indicates that for every tourism dollar spent in Arizona, \$0.82 stays in the economy, with the remainder “leaked” to businesses outside of Arizona.

For every tourism dollar spent \$0.12 goes to Federal taxes and \$0.11 goes to state taxes. Every \$68,630 spent supports a job with an average of \$33,760 in wages.



IMPLAN modeling from this total direct spending resulted in tax revenue of \$9.7 million (\$5.1 million in federal and \$4.6 million in state/local taxes) and a total value-added estimated economic contribution of \$35.4 million—\$13.9 million from out-of-state subscribers, \$18.8 million from Arizona subscribers, and \$2.7 million from *AHM* shoppers. The estimated economic contribution (Figure 1) was projected to have generated \$21.2 million in wages and proprietor income (a subset of value added) and supported 628 Arizona jobs

An additional \$3.7 million was extrapolated to have been spent on days added to the trip due to *AHM*, and another \$25.0 million was spent by day-trippers. In the *AHM* Facebook page survey's non-representative sample, respondents spent an estimated \$146,498.

Economic impact includes spending from only visitors outside the local area and is thus limited to the out-of-state subscriber survey results. The total direct spending extrapolated from the out-of-state subscriber survey was \$17.6 million. After accounting for leakage, this spending resulted in \$3.8 million of tax revenue (\$2.0 million in federal and \$1.8 million in state/local taxes) and a total value-added estimated economic impact of \$13.9 million, including \$8.3 million in wages and proprietor income and 244 Arizona jobs supported (Figure 2).

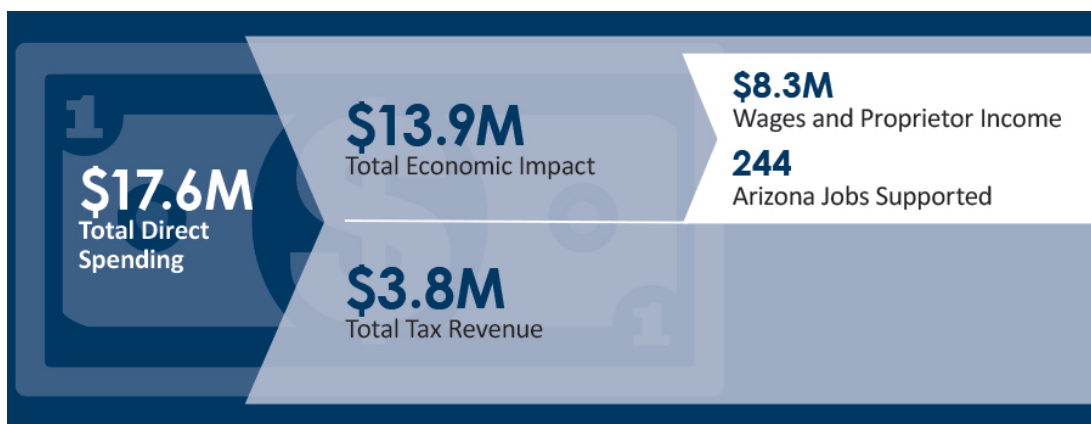


Figure 2. Estimated Annual Economic Impact of Out-of-State AHM Subscribers

The minimum direct tourism expenditures from subscribers who do not live in Arizona, and that can be considered a direct result of *AHM*, amounted to just over \$17.6 million annually. Given the annual budget of *AHM* (about \$4.7 million) and the direct expenditures due to travel by out-of-state subscribers, the minimum benefit/cost ratio of the magazine was 3.74:1. In other words, for every dollar spent by *AHM*, at least \$3.74 enters Arizona's economy from out-of-state subscribers directly because of the magazine. Considering indirect and induced impacts, the economic impact of out-of-state subscribers was over \$13.9 million in the past year.

For every dollar spent by AHM, at least \$3.74 enters Arizona's economy from out-of-state subscribers directly because of the magazine.

Economic Analysis Details

Survey respondents were frequent travelers to and in Arizona. Most respondents had taken an overnight leisure trip in Arizona during the past five years (Table 1):

- Out-of-state subscribers, 82 percent
- Arizona subscribers, 88 percent
- *AHM* shoppers, 79 percent
- *AHM* Facebook page users, 89 percent

Many respondents took trips for multiple nights (Table 1):

- *AHM* Facebook page users stayed an average of 6.1 nights
- *AHM* shoppers stayed an average of 7.0 nights
- Arizona subscribers stayed an average of 3.5 nights
- Out-of-state subscribers stayed an average of 16.3 nights

Among subscribers, at least a quarter of trips were directly motivated by an *AHM* information source: out-of-state subscribers at 25 percent, Arizona subscribers at 33 percent. Motivated to a lesser extent were *AHM* shoppers (11 percent) and *AHM* Facebook page users (16 percent). Most Arizona residents, 77 percent, had been motivated by an *AHM* information source to take Arizona day-trips. Focus groups of *Arizona Highways TV* viewers also indicated that the show influenced their travel decisions.

Table 1. Respondents who Visited Arizona in the Five Years Prior to Taking the Survey

Overnight Leisure Trip	Out-of-State Subscribers	Arizona Subscribers	AHM Shoppers	AHM Facebook Page Users
Yes (%)	82	88	79	89
No (%)	18	12	21	11
Average number of Arizona visits over five years	5.2	10.5	8.2	12.6
Average length of stay on most recent trip (# of nights)*	16.3	3.5	7.0	6.1

*Outliers removed

The surveys asked respondents if the information source influenced their decisions to include the destination in their travel plans or influenced them to plan for additional time at the destination. Respondents were also asked if *AHM* directly influenced them to take their most recent overnight trip. Answering “yes” to this question were (Table 2):

- 33 percent of Arizona subscribers
- 25 percent of out-of-state subscribers
- 11 percent of *AHM* shoppers
- 16 percent of *AHM* Facebook page users

Respondents who indicated they did not take the trip due to direct *AHM* influence often added extra days as a result of *AHM* information (Table 2):

- Arizona subscribers, 24 percent
- Out-of-state subscribers, 20 percent
- *AHM* shoppers, 4 percent
- *AHM* Facebook page users, 17 percent

Table 2. AHM Influence on Travel Plans (Affirmative Responses)

Influence	Out-of-State Subscribers (%)	Arizona Subscribers (%)	AHM Shoppers (%)	AHM Facebook Page Users (%)
Decided to include Arizona in travel plans	25	33	11	16
Planned for additional time in Arizona	20	24	4	17

For Arizona residents, the decision to take day trips was also influenced by *AHM*: Arizona subscribers (77 percent) and *AHM* Facebook page users (78 percent).

Direct Visitor Spending

Key highlights of total direct visitor spending are shown in Table 3, which itemizes expenditures per spending item for each respondent type. Spending data are included for respondents who reported their spending for their most recent trip in the 12 months prior to taking the survey. Respondents answered this question *only* if they had traveled in Arizona in the last 12 months in order to reduce recall error. The highest spending was on lodging and restaurants.

Table 3. Estimated Average Direct Expenditures (\$) per Travel Party (Overnight Trips) on Most Recent Arizona Trip in the 12 Months Prior to Taking the Survey

Spending Category	OOS* Trip Total	OOS Per Night	AZ Subscribers Trip Total	AZ Subscribers Per Night	AHM Shop Trip Total	AHM Shop Per Night	AHM Facebook Trip Total	AHM Facebook Per Night
Lodging	482.04	29.61	242.29	69.03	486.00	69.43	235.55	38.74
Camping	14.39	0.88	14.35	4.09	25.00	3.57	20.64	3.39
Arts and Crafts	71.77	4.41	31.62	9.01	84.00	12.00	39.71	6.53
Other Shopping	178.74	10.98	65.42	18.64	189.00	27.00	83.12	13.67
Entertainment/ Fees	88.89	5.46	62.51	17.81	122.00	17.43	83.55	13.74
Groceries	157.46	9.67	45.07	12.84	117.00	16.71	74.15	12.20
Restaurants	291.10	17.88	128.69	36.66	259.00	37.00	153.14	25.19
Vehicle Rental	134.22	8.24	4.61	1.26	89.00	12.71	40.05	6.59
Vehicle Fuel	116.74	7.17	71.09	20.25	142.00	20.14	98.47	16.20
Vehicle Repair	16.63	1.02	3.52	1.00	5.00	0.71	10.67	1.75
Total	1,551.98	95.33	668.98	190.59	1,518.00	216.70	839.05	138.00

*OOS = Out-of-State Subscribers, AZ Subscribers = Arizona Subscribers, *AHM* Shop = *AHM* Shoppers, *AHM* Facebook = *AHM* Facebook Page Users

Note: Outliers were deleted from this analysis. Outliers are numbers much higher or lower than the majority.

Table 4 details the one-year expenditures that can be attributed to *AHM*, *AHM* products, and the *AHM* Facebook page. In the tourism industry a very similar evaluation method is called a “conversion study.” This kind of research determines the extent to which tourism promotional efforts “convert” prospective tourists into actual tourists.

To gain this type of information, studies specifically ask respondents if the information source of interest influenced their decisions to include the destination in their travel plans or influenced them to plan for additional time at the destination. The questions asked to gain such information are similar to questions these study respondents were asked, and their responses are reported in Tables 2 and 4. The total

expenditure numbers consider the amount of money a respondent and their travel party spent on their most recent trip to/in Arizona over the 12 months prior to taking the survey, the average number of annual trips taken by respondents, and the self-reported percentage of those trips that were made directly as a result of *AHM*, *AHM* products, or the *AHM* Facebook page.

Table 4. Estimated Direct *AHM*-Influenced Expenditures for 12 Months Prior to Taking the Survey

Category	Out-of-State Subscribers	Arizona Subscribers	<i>AHM</i> Shoppers	<i>AHM</i> Facebook Page Users	Total or Average
Number of subscribers/shoppers/Facebook page users (#)	47,046	63,055	19,887	746	130,734
Estimated average number of trips taken in 12 months (#)*	1.21	1.79	1.43	1.93	1.58
Estimated number of trips taken in 12 months (#)*	45,484	98,652	22,472	1,126	167,734
Average party expenditure per trip (\$)*	1,552	669	1,518	839	4,578
Estimated total 1-year impact (\$)	70,589,641	65,996,093	34,112,725	945,146	171,643,605
Percent of trips influenced by <i>AHM</i> (%)	25.0	33.0	10.7	15.5	28
Number of trips influenced by <i>AHM</i> (#)	11,371	32,555	2,405	175	46,506
Estimated total 1-year <i>AHM</i> influenced impact (\$)	17,647,410	21,778,711	3,650,062	146,498	43,222,681

*Extrapolated from the percentage of total respondents who reported traveling in Arizona in the past five years

Tables 5 and 6 provide additional detail showing per-night expenditures and annual expenditures by category, respectively. Survey respondents spent the most money on lodging, restaurants, vehicle rental, fuel, and shopping:

- The estimated direct *AHM*-influenced expenditures for one year for out-of-state subscribers were extrapolated to be \$17,647,410.
- The estimated direct *AHM*-influenced expenditures for one year for Arizona subscribers were extrapolated to be \$21,778,711.
- The estimated direct *AHM*-influenced expenditures for one year for *AHM* shoppers were extrapolated to be \$3,650,062.
- Because the survey of *AHM* Facebook page users was a convenience sample (not random and therefore not representative), results cannot be extrapolated beyond the people who replied to the survey. That group spent about \$146,498 in a year.

Table 5. Estimated AHM-Influenced Per-Night Expenditures per Visiting Party

Spending Category	Out-of-State Subscribers (\$)	Arizona Subscribers (\$)	AHM Shoppers (\$)	AHM Facebook Page Users (\$)	Total Spending (\$)
Lodging	336,692	2,247,279	166,946	6,764	2,757,681
Camping	10,006	133,150	8,584	593	152,333
Arts and crafts	50,146	293,321	28,854	1,140	373,461
Other shopping	124,852	606,827	64,922	2,387	798,988
Entertainment/fees	62,085	579,806	41,911	2,399	686,201
Groceries	109,957	418,007	40,180	2,129	570,273
Restaurants	203,312	1,193,470	88,967	4,398	1,490,147
Vehicle rental	93,697	41,019	30,561	1,150	166,427
Vehicle fuel	81,529	659,241	48,427	2,828	792,025
Vehicle repair	11,598	32,556	1,707	306	46,167
Total AHM-Influenced Per-Night Spending Per Party	1,083,988	6,204,676	521,059	24,095	7,833,818

Table 6. Estimated Total Direct Annual Expenditures for Overnight Visitors

Spending Category	Out-of-State Subscribers (\$)	Arizona Subscribers (\$)	AHM Shoppers (\$)	AHM Facebook Page Users (\$)	Total Spending (\$)
Lodging	5,481,229	7,887,775	1,168,597	41,127	14,578,728
Camping	163,627	467,166	60,113	3,604	694,510
Arts and crafts	816,090	1,029,392	201,980	6,933	2,054,395
Other shopping	2,032,435	2,129,755	454,454	14,513	4,631,157
Entertainment/fees	1,010,759	2,035,019	293,351	14,588	3,353,717
Groceries	1,790,462	1,467,258	281,329	12,947	3,551,996
Restaurants	3,310,069	4,189,516	622,771	26,738	8,149,094
Vehicle rental	1,526,202	150,079	214,002	6,993	1,897,276
Vehicle fuel	1,327,439	2,314,342	341,442	17,193	4,000,416
Vehicle repair	189,098	114,594	12,022	1,863	317,577
Total	17,647,410	21,778,711	3,650,061	146,498	43,222,680

Economic Contribution of Visitor Spending

Note that IMPLAN modeling was done only for three groups: out-of-state subscribers, Arizona subscribers, and *AHM* shoppers. This was due to the nature of the data, which were collected from randomly-selected respondents, and that could be subjected to inferential analysis.

- In a year, total *AHM*-related visitor spending was estimated to have generated over 628 jobs and over \$21.2 million in labor income.
- Total *AHM*-related visitor spending was estimated to have created more than \$6.5 million per night and \$35.4 million over 12 months in value-added economic contribution, or the contribution to gross state product (Tables 7 and 8).

Value added does not include costs of non-labor inputs to production, so many economists view it as the most appropriate measure of economic contribution of an industry and report it as the economic contribution (McGrath et al. 2016; Souza et al. 2019). Labor income is encompassed in value added but is broken out separately because it represents the total payroll costs.

Table 7. Estimated Total Per-Party Per-Night Economic Contribution

Category	Number of Jobs	Labor Income (\$)	Value Added (\$)	Output (\$)
Out-of-State Subscribers	14.1	482,552	805,438	1,394,947
Arizona Subscribers	95.5	3,208,112	5,355,613	9,272,650
<i>AHM</i> Shoppers	6.9	229,613	382,852	663,378
Total	116.5	3,920,278	6,543,903	11,330,975

The output contribution (direct sales) extrapolated from the *AHM* respondent total responses was over \$61.3 million annually, with a total of 628 jobs generated (Table 8).

Table 8. Estimated Total Annual Economic Contribution

Category	Number of Jobs	Labor Income (\$)	Value Added (\$)	Total Economic Output (\$)
Out-of-State Subscribers	244	8,339,498	13,919,714	24,107,818
Arizona Subscribers	335	11,263,418	18,804,522	32,557,721
<i>AHM</i> Shoppers	48	1,607,640	2,680,496	4,644,534
Total	628	21,210,557	35,404,731	61,310,073

Of the top 10 industries effected, generated jobs were primarily created in the restaurant and lodging industries (Table 9). Jobs in the retail sector and other industries were generated on a smaller scale.

Table 9. Estimated Annual Number of Jobs Created in Top 10 Industries

Type of Industry	Out-of-State Subscribers	Arizona Subscribers	AHM Shoppers
Full-service restaurants	70.6	72.3	10.7
Hotels and motels, including casino hotels	53.3	84.7	12.6
Other amusement and recreation industries	15.5	10.9	4.2
Retail-Miscellaneous store retailers	9.5	29.2	1.0
Retail-General merchandise stores	9.4	33.1	0.9
Retail-Food and beverage stores	8.5	6.4	2.0
Automotive equipment rental and leasing	7.2	0.0	0.0
Other accommodations	4.9	2.7	2.2
Real estate	4.7	7.3	1.3
Retail-Gasoline stores	3.5	2.4	0.4

Visitor spending—including out-of-state subscribers, Arizona subscribers, and *AHM* shoppers—was estimated to have produced almost \$4.6 million in state and local taxes and almost \$5.1 million in federal taxes.

Partial results for the IMPLAN model for out-of-state subscribers are provided in Table 10. Their spending was estimated to result in \$8.4 million in direct value added, \$5.2 million in direct labor income, and 177 jobs. This excludes about \$3.5 million that is leaked from the economy on goods not produced in Arizona. With indirect and induced effects considered, the total estimated effects are:

- \$24.1 million in output (sales revenue)
- \$13.9 million in value added
- \$8.3 million in labor income added
- 244 jobs generated
- \$3.8 million in taxes generated

Table 10. Estimated Out-of-State Subscribers' Annual Economic Impact

Impact Type	Number of Jobs	Labor Income (\$)	Value Added (\$)	Output (\$)
Direct Effect	176.5	5,151,320	8,385,864	14,136,876
Indirect Effect	28.7	1,443,839	2,426,052	4,535,566
Induced Effect	38.9	1,744,340	3,107,798	5,435,376
Total Effect	244.1	8,339,498	13,919,714	24,107,818

With respect to the other individual study groups (Arizona subscribers and *AHM* shoppers):

- Arizona subscribers contributed about \$18.8 million in value added, over \$11.2 million in labor income, approximately 335 jobs, and almost \$5.1 million in taxes.
- *AHM* shoppers contributed about \$2.7 million in value added, over \$1.6 million in labor income, approximately 48 jobs, and over \$735,000 in taxes.

In addition to the spending of overnight visitors attributable to *AHM* (for the percentage of trips influenced directly by *AHM*, refer to Table 2), other direct spending was documented. Visitors were not only asked to indicate whether their most recent trip was directly due to *AHM*, its products, or its Facebook page, but also whether they added additional days to their trip as a result of *AHM*.

Table 11 shows the direct spending outcomes of adding additional trip days due to the magazine, products, or Facebook page. Note that the additional travel day metrics exclude respondents who indicated their entire trip was directly influenced by *AHM*, its products, or its Facebook page because their spending was incorporated within the entire trip (some people answered “yes” to both questions).

- The estimated total amount of spending on additional days due to *AHM*-influence extrapolated for out-of-state subscribers was \$1,074,449.
- For *AHM* Arizona subscribers, the estimated total amount of spending due to *AHM*-influence was extrapolated to be \$2,030,621.
- The total amount of spending on additional days due to *AHM*-influence extrapolated for *AHM* shoppers was an estimated \$55,849.
- For *AHM* Facebook page users it was an estimated \$52,872.

Table 11. Estimated Additional Days Spending Due to *AHM* Influence

Items	Out-of-State Subscribers	Arizona Subscribers	<i>AHM</i> Shoppers	<i>AHM</i> Facebook Page Users	Total or Average
Estimated number of annual visits (#)	45,483	98,652	22,472.15	1,126	167,733
Percent staying additional days (percent)	11.8	12.0	3.8	13.3	10.9
Number of visits influenced (#)	5,367	11,838	854	150	18,209
Average additional nights (#)	2.10	0.90	3.02	2.57	1.37
Total additional nights (#)	11,271	10,654	2,579	385	24,889
Average per-night expenditure (\$)	95.33	190.59	217.70	137.32	149.33
Added expenditure (\$)	1,074,449	2,030,621	558,849	52,872	3,716,791

Only direct spending of respondents has been reported for *AHM* Facebook page users because of the nature of the sample (convenience sample). Therefore, the entire population of *AHM* Facebook page users are not accounted for in this study nor are indirect or induced impacts included. The *AHM* Facebook page influences travel to or in Arizona with more than 15 percent of respondents indicating that the page directly influenced their most recent trip. These visitors alone spent over \$146,000 in one year's time. Of the respondents to the *AHM* Facebook survey, 42 percent were from out-of-state, so at least 42 percent of the spending can be considered revenue introduced into Arizona's economy. An additional \$52,872 of direct spending can be attributed to those who added time to their trips due to information from the *AHM* Facebook page. In addition, 78 percent of *AHM* Facebook page users took day trips in a single 12-month period with an average of nine trips per travel party. The *AHM* Facebook page users did not report their spending on day trips, but it is likely somewhat less than Arizona subscribers given that *AHM* Facebook page respondents were younger and had lower incomes.

Typically, day trips are not included in tourism spending statistics because they do not involve an overnight stay. However, the amount of day trips taken by Arizona subscribers is notable (an average of eight per year) and direct spending on day trips is an important aspect of *AHM*'s economic contribution. A large percentage of Arizona *AHM* subscribers (77 percent) took at least one day trip in Arizona over the past year. Many took several trips with an average of 8.4 trips per travel party, 40 percent of which were attributable to *AHM*, resulting in an estimate of over \$25.0 million direct spending. Like overnight trips by Arizona subscribers, this money is not new to the Arizona economy but much of it is redistributed from urban areas (where most of the population lives) to rural areas (where *AHM* tends to focus content and imagery).

Generally, the expenditures from out-of-state visitors are considered to be the economic impact, or the net gain, to a state's economy, as this is "outside" money that enters the state's economy. The economic rationale is that money spent on in-state travel would still be spent in Arizona on alternative products and services if the trip was not made. Note, however, that without *AHM*'s influence, it is probable that at least some of what Arizona subscribers spend in state would be diverted to travel in other states, or even out of the country, as an alternative to an in-state trip.

It can also be noted that in-state expenditures by state residents are important to many Arizona communities. For rural Arizona communities, much of the tourism market is residents from the Phoenix and Tucson metropolitan areas and, as a result, rural communities are quite reliant on in-state travel expenditures. The expenditures from Arizona *AHM* subscribers can be considered, at least in part, economic effects retained in Arizona, rather than being spent elsewhere, with much of that spending moving from the larger metropolitan areas to rural areas. Residents' approximate direct spending on overnight trips was \$21,778,711.

Without AHM's influence, at least some of what Arizona subscribers spend in state would likely be diverted to travel in other states or countries.

Although their per-trip spending was less than out-of-state subscribers, residents' travel spending due to *AHM* was somewhat more than out-of-state visitors due to several factors as reported by survey respondents: there are more Arizona subscribers than out-of-state subscribers, they are more likely to travel in Arizona, their average number of overnight trips in the state is higher, and *AHM* has a greater amount of influence on their travel decisions. Considering indirect and induced impacts, the economic impact of Arizona subscribers was approximately \$18,804,522 in one 12-month period. In addition, extrapolating from those who indicated they added time to their trips, an additional estimated \$2,030,621 was added to the economy in direct spending.

Those who purchased *AHM*-related retail products were influenced to travel by those products, although not to the same extent as the magazine subscribers or *AHM* Facebook page users. *AHM* shoppers' direct spending on overnight trips was approximately \$3,650,062 over the 12-month period prior to taking the survey (note that the sample includes in- and out-of-state shoppers). While the percentage of *AHM* shoppers traveling in or to Arizona (78 percent) was very similar to that of the out-of-state subscribers and *AHM* Facebook respondents, the percentage of people influenced to travel by the product (10.7 percent) was lower than for the magazine or the Facebook page. Considering both indirect and induced impacts, the estimated economic impact of *AHM* shoppers was almost \$2.7 million over the 12-month period. Also, those who indicated they added time to their trips spent approximately an additional \$558,849 in direct spending.

Other Findings

Groups Not Included in the Survey

In addition to the economic findings already discussed, several other groups may have been influenced by the magazine to travel. One important group is those individuals to whom subscribers have given their magazines. More than three-quarters of both subscriber groups—Arizona subscribers at 78 percent and out-of-state subscribers at 76 percent reported they share their magazines with other people. This suggests that thousands of people pass their magazines along to others at least occasionally, representing a substantial number of additional individuals who may be influenced to travel in Arizona by *AHM*. Another group that is likely influenced by the magazine to travel to and in Arizona includes people who buy *AHM* from newsstands, bookstores, or other retail outlets. This represents another large number of people whose travel to and in Arizona may have been influenced by the magazine. In addition, corporate, hotel, library, and other such subscriptions reach individuals who may have been influenced by the magazine by reading it via these alternative outlets. Also, people who receive an *AHM* gift may have been influenced to travel in Arizona. Similar to *AHM* subscribers, some individuals may be influenced by the products but are not included in the study. A substantial percentage of *AHM* shoppers (48 percent) bought an item for someone else, and the recipients of these products are not included in the study. Lastly, *AHM* Facebook page users often share postings with followers and friends who could be motivated to travel upon seeing those posts.

Impact of the AMH Facebook Page

Although it is not possible to make general conclusions about the people who use the *AHM* Facebook page—since the data collected was not a random sample—the findings from users who responded can provide insights to the way the Facebook page influences travel. Almost all (96 percent) indicated that they found the page useful. These *AHM* Facebook page users either agreed or strongly agreed to several statements about the *AHM* Facebook page that suggest they perceive the page as appealing, informative, and trustworthy (especially postings by *AHM* staff). They reported that they would recommend *AHM*'s Facebook page to others and that it has increased their interest in Arizona as a travel destination. At least half of the respondents used *AHM*'s Facebook page to seek information on sightseeing (82 percent), day trips (63 percent), recreation (58 percent), and short trips of two to four days (55 percent).

Impact of Arizona Highways Television

Although it is also not possible to make general conclusions about populations from focus groups, the sessions with *Arizona Highways Television* viewers indicated that the show influences travel in Arizona; every participant in the focus groups noted that they had visited a destination because of the show. The show gave them the travel “itch.” Some indicated that they made special trips specifically to visit a featured destination or attraction. Some focus group participants mentioned they stayed longer due to information provided on the show. They noted that *Arizona Highways Television* and other *AHM*

products were more important to trip planning than other information or services, such as the Arizona Office of Tourism or newspapers (such as *The Arizona Republic*). Watching the show allows a visualization of a place (i.e., it familiarizes a traveler with a place). The show also inspired viewers to search for information about Arizona on the web and to check out online blogs.

Focus group discussions with *Arizona Highways Television* viewers demonstrated that the show has considerable influence on travel in Arizona. The participants indicated that they make travel decisions based on what they see on the show. Every participant noted that they had visited a place because of the show. Some indicated that they made special trips specifically to visit a featured destination or attraction. Others indicated they added a place that has been featured on the show to their itinerary rather than taking a special trip. Some mentioned they stayed longer due to information provided on the show. Several noted they had taken day trips to places featured on the program. Quite a few participants said they record and then keep episodes to view again later, others take notes or keep lists to use in the future. A few participants shared the information with others. A few said they were recent residents of the state who subscribed to the magazine and watched the show to inspire their in-state travel.

This information cannot be generalized to the broader viewership, as it was not a large random sample of viewers, but the resulting economic impact suggests that the show has considerable influence on travel in the state. *Arizona Highway Television* influences mainly Arizona residents' travel decisions, although it also impacts some travel by out-of-state visitors who access the show on YouTube.

Impact of Products

AHM shoppers bought a variety of products but especially calendars (56 percent). Most bought merchandise (52 percent) as a reminder of their trip. A majority bought it for themselves (79 percent), although the purchase of merchandise as a gift was not uncommon.

Impact of Arizona Highways Magazine

Arizona Highways Magazine customers tended to be older with a fairly high socio-economic status, with nearly half having household incomes over \$75,000 per year. *AHM* Facebook page users, on the other hand, were somewhat younger with an accompanying lower socio-economic status but still with higher incomes (about a third with household incomes over \$75,000). Many long-time magazine subscribers (34 percent subscribed for more than eight years) were also out-of-state subscribers, though many Arizona subscribers had subscriptions for one to four years. Their demographic profile is important in that it influences: 1) consumption of media—more serious and intellectual media (travel, photography, *American West*) like *AHM*; 2) spending power—they have discretionary income; and 3) travel behavior—they have a love of travel and a love for Arizona that is highly influenced by *AHM*, as well as money to spend on travel.

The influence that *AHM* and its related products and media had on travel among respondents is demonstrated through their ratings of the importance of various travel information sources.

Respondents used three primary information sources with the magazine ranking second or third in both frequency of use (Table 12) and importance (Table 13), providing evidence for the importance of the magazine in inspiring travel in Arizona. The magazine tends to reach people who are not using other forms of state tourism marketing products. Photographs and the “scenic drive” section are the parts of the magazine that subscribers find to be the most influential and helpful with respect to making travel decisions.

Table 12. Information Sources Used for Trip Planning—Extent of Use Ratings*

All Information Sources Used**	Out-of-State Subscribers	Arizona Subscribers	AHM Shoppers	AHM Facebook Page Users
Previous visit	4.1	3.8	4.0	4.0
<i>Arizona Highways Magazine</i>	2.9	2.8	2.7	2.5
Friends/family	2.9	2.5	2.6	2.8
Travel book/travel guide	2.0	1.7	1.9	1.6
Brochure/pamphlets	1.8	1.7	1.8	1.6
Other website(s)	1.7	2.0	1.8	2.1
Travel/auto club(s)	1.6	1.5	1.5	1.3
<i>Arizona Highways</i> website	1.5	1.4	1.5	1.9
Information from Arizona Office of Tourism	1.4	1.3	1.3	1.4
Arizona Office of Tourism website	1.4	1.3	1.3	1.4
Convention and visitor bureau/local tourist office or information center	1.4	1.4	1.4	1.4
Other sources	1.4	1.3	1.5	1.2
Newspaper(s)	1.3	1.4	1.3	1.3
Other TV news stories or programs	1.3	1.4	1.3	1.3
Other magazines	1.3	1.3	1.3	1.3
<i>AHM Facebook Page</i>	1.3	1.2	1.2	2.1
<i>Arizona Highways Television</i>	1.1	1.6	1.4	1.5
Travel agent	1.1	1.1	1.1	1.0
<i>Arizona Highways Instagram</i>	1.1	1.1	1.0	1.2
<i>Arizona Highways blog</i>	1.1	1.1	1.1	1.1

*Extent of use: 1 = Not at all; 2 = A little; 3 = Some; 4 = Quite a bit; 5 = A lot

** Respondents checked all sources that applied.

Table 13. Travelers' Most Important Source of Information

Most Important Information Source	OOS* #	OOS %	AZ Subscribers #	AZ Subscribers %	AHM Shop #	AHM Shop %	AHM Facebook #	AHM Facebook %
Previous visit	293	47	315	41	475	43	113	45
Friends/family	142	23	128	17	204	19	33	13
<i>Arizona Highways Magazine</i>	86	14	120	16	166	15	31	13
Other sources	40	6	57	8	81	7	18	7
Other website(s)	17	3	51	7	51	5	23	9
Travel book/ travel guide	12	2	8	1	25	2	1	0
Other magazines	5	1	17	2	11	1	1	<1
Travel/auto club(s)	4	1	7	1	12	1	2	1
Arizona Office of Tourism website	3	<1	6	1	2	0	2	1
Information from Arizona Office of Tourism	5	1	5	0.5	9	1	0	0
Convention and visitor bureau/local tourist office or information center	3	<1	5	<1	6	<1	2	1
<i>AHM Facebook Page</i>	3	<1	4	<1	5	<1	12	5
<i>Arizona Highways website</i>	5	1	2	<1	5	<1	6	3
Travel agent	1	<1	5	<1	8	1	0	0
Newspaper(s)	1	<1	4	<1	6	<1	0	0
Brochure/ pamphlets	2	0	14	2	16	2	3	1
<i>Arizona Highways Television show</i>	0	0	12	2	8	1	1	<1
Other TV stories or programs	0	0	1	<1	4	<1	0	0
<i>Arizona Highways Instagram</i>	0	0	1	<1	1	<1	1	<1
<i>Arizona Highways blog</i>	0	0	0	0	1	<1	1	<1
Total	622	100	762	100	1,096	100	250	100

*OOS = Out-of-State Subscribers, AZ Subscribers = Arizona Subscribers, AHM Shop = AHM Shoppers, AHM Facebook = AHM Facebook Page Users

The study produced a number of other findings related to the influence of *AHM* on travel. As previously noted, a large percentage of subscribers share their magazines with other people, but 87 percent also keep their magazines for future reference, which prolongs the influence of the magazine for months or even years. About half of respondents have taken one or more copies of the magazine with them on a trip, serving essentially as a guidebook.

Magazine subscribers had a high intention to renew their subscriptions, with 80 to 84 percent stating they were very or extremely certain they would do so (Table 14). They reported a highly favorable impression of the magazine—95 to 98 percent selected very or extremely favorable (Table 15)—and that it positively influenced their perceptions of Arizona as a place to travel (Table 16). Subscribers noted that the magazine meets their needs for travel information (Table 17).

While popular with younger respondents, the use of social media, such as Facebook and Instagram, doesn't emerge strongly as a primary information source among older travelers. The most prevalent use of Facebook for travel plans was for sightseeing and day trips with no overnight stays. A large percentage of Facebook users found the page to be useful for travel decision making (96 percent).

Table 14. Willingness to Renew Magazine Subscription

Re-Subscribe Responses	OOS* #	OOS %	AZ Subscribers #	AZ Subscribers %
Not at all certain	26	4	26	3
Slightly certain	16	2	30	3
Moderately certain	76	10	125	14
Very certain	185	26	250	27
Extremely certain	413	58	490	53
Total	716	100	921	100

*OOS = Out-of-State Subscribers, AZ Subscribers = Arizona Subscribers

Table 15. Overall Impression of Arizona Highways Magazine

Impression	OOS* #	OOS %	AZ Subscribers #	AZ Subscribers %
Not at all favorable	1	0	0	0
Slightly favorable	3	0	6	1
Moderately favorable	16	2	37	4
Very favorable	218	30	297	32
Extremely favorable	483	68	579	63
Total	721	100	919	100

*OOS = Out-of-State Subscribers, AZ Subscribers = Arizona Subscribers

Table 16. Rating of Perceptions of Arizona as a Place to Travel Based on Information from *AHM**

Perceptions of Arizona	Out-of-State Subscribers	Arizona Subscribers
Arizona has beautiful scenery and natural attractions	4.8	4.8
Arizona is an attractive travel destination	4.8	4.7
Arizona has interesting cultural attractions	4.6	4.6
Arizona has interesting historical attractions	4.6	4.6
Arizona has an unspoiled environment	4.3	4.1

*Scale: 1 = Strongly disagree; 2 = Disagree; 3 = Neither agree nor disagree; 4 = Agree; 5 = Strongly agree

Table 17. Rating of How Travel Information Provided in the Magazine Meets Travelers' Needs*

Meets Travel Needs	Out-of-State Subscribers	Arizona Subscribers
<i>AHM</i> portrays Arizona positively	4.7	4.6
<i>AHM</i> provides useful travel information	4.4	4.3
The travel information in <i>AHM</i> is professional	4.4	4.3
<i>AHM</i> provides helpful travel information	4.4	4.3
<i>AHM</i> has increased my interest in exploring/traveling around Arizona	4.4	4.4
The travel information in <i>AHM</i> is trustworthy	4.4	4.3
<i>AHM</i> provides a variety of travel information	4.4	4.3
The travel information in <i>AHM</i> is credible	4.3	4.3
The travel information in <i>AHM</i> is reliable	4.3	4.2
<i>AHM</i> provides up-to-date travel information	4.2	4.2
The travel information in <i>AHM</i> is authoritative	4.1	4.0
The travel information in <i>AHM</i> is official	4.0	3.9
I am knowledgeable about Arizona as a travel destination because of <i>AHM</i>	3.8	3.9
I am familiar with Arizona as a travel destination because of <i>AHM</i>	3.7	3.8

*Scale: 1 = Strongly disagree; 2 = Disagree; 3 = Neither agree nor disagree; 4 = Agree; 5 = Strongly agree

Characteristics of Survey Respondents

When planning trips to and in Arizona, the results indicate that visitors had a long planning horizon. The respondents were asked two questions: how long before their trip had they made the decision to travel in Arizona, and how long before their trip had they made their travel arrangements. Visitors from out of state planned their trips fairly far in advance of their trip—more than half had planned four months or more ahead of time—while Arizona residents planned in-state trips in the shorter term (more than half planned three to 12 weeks ahead of time). Most respondents made their travel arrangements closer to the start of their trip but chose their destination earlier in the planning process.

Respondents to the survey tended to be high-income, highly educated older people. When traveling in Arizona, most were with a spouse or partner. Only about 16 percent had their children with them and about 6 percent traveled with their grandchildren. Interestingly, a fairly large number of respondents noted in the open-ended response that they were traveling with a pet. Nearly all residents traveled within the state in their own vehicle, as did about half of out-of-state respondents. Another 39 percent rented their vehicle, many of whom first arrived via a commercial flight. This group primarily stayed in hotels and motels (about 59 percent for all groups except for out-of-state subscribers, which was 48 percent). Quite a large percentage of out-of-state respondents (35 percent) stayed in a private home, most likely with friends and family (this category excluded second homes and short-term rentals).

Five activity types stand out as the most common for Arizona travelers, whether they were residents or coming from elsewhere:

- Sightseeing and driving to view scenery
- Doing natural area activities, such as visiting parks and hiking
- Doing cultural, arts, and heritage activities, such as visiting museums and historic sites
- Visiting friends and family
- Shopping

Natural area activities, visiting family and friends, and sightseeing were reported as the most influential activities for the visit. As is common, shopping is an activity that most people do but is rarely a motivator for travel, so it has virtually no influence on people's decision to travel. Encompassed within the sightseeing activity, about 68 percent of the study respondents noted that they drove on one of Arizona's scenic or historic roads. Only 14 percent were not sure whether they had driven on one of these roads.

Overall, findings indicate that many people are *AHM* loyal and engage in multiple forms of *AHM* media. While a small percentage of subscribers use the *AHM* Facebook page or watch the TV show, 77 percent of *AHM* shoppers were *AHM* subscribers, 35 percent of *AHM* Facebook page users were also *AHM* subscribers, and most TV show watchers were *AHM* subscribers.

Visitors to Arizona are looking for experiences that are consistent with the content provided by the magazine and its associated products. Much of the *AHM* content highlights scenic drives, scenery, nature, and culture—the kinds of attractions and activities that *AHM* subscribers, shoppers, viewers, and users are interested in.

Methods

Several survey efforts were undertaken to gather data, including spending data, from survey participants. All survey instruments and information for survey participants were available in English and Spanish. The *AHM* subscribers' survey included both a mail and an internet survey to measure the influence of *AHM* on digital and print subscribers' travel decision-making and related behavior. The mail survey was administered to a stratified random sample of *AHM* subscribers drawn from the magazine's subscriber list. Likewise, the internet survey was sent to a stratified random sample of subscribers for whom email addresses were available. For the internet survey, the research team used Qualtrics online survey software. The samples were stratified to represent proportionate numbers of Arizona subscribers and out-of-state subscribers, as well as gift and self-subscribers. The sample was drawn to ensure a good chance of a reasonably representative sample from each geographic stratum (resident and non-resident).

A modified Dillman (2000) survey design technique was used for the surveys. This technique employs a series of mailings/emails to achieve maximum response rates. Mail surveys included: 1) an initial mailing of the questionnaire, a cover letter explaining the purpose of the study, and a pre-paid return envelope; 2) a reminder postcard sent to non-respondents about 10 days after the initial survey packet was sent; and 3) a second follow-up to remaining non-respondents that again included a letter, questionnaire, and reply envelope.

Online surveys included: 1) an initial email explaining the study with a link to the questionnaire; 2) a reminder email to non-respondents three days later, and 3) another reminder email to remaining non-respondents in another five to seven days.

Response rates are summarized in Table 18. The response rate is the percentage of questionnaires distributed that are returned and usable. Undeliverable questionnaires are not included in the calculation. Usable questionnaires contain enough complete answers to include in the statistical analyses.

Table 18. Survey Response Rates

Survey	OOS* Mail	OOS Online	AZ Subscribers Mail	AZ Subscribers Online	AHM Shop Mail	AHM Shop Online
Initial sample size (#)	955	1,231	1,045	1,984	1,188	3,118
Number of bad address returns/inappropriate respondents (#)	10	46	20	80	20	121
Revised sample size (#) (minus bad addresses)	945	1,185	1,025	1,904	1,168	2,997
Final sample size (#)	248	489	317	591	324	1,070
Response rate (%) (complete and usable questionnaires)	26	41	31	31	28	36

*OOS = Out-of-State Subscribers, AZ Subscribers = Arizona Subscribers, AHM Shop = AHM Shoppers

The AHM shoppers survey was also conducted via mail and online distribution following a modified Dillman (2000) survey approach. A mail survey was administered to a systematic random sample of people who purchased an AHM retail product via an online order during the past three years through the online *Arizona Highways* store. AHM shoppers were also intercepted at the *Arizona Highways* retail store in Sky Harbor Airport. A researcher observed customers at the store to determine what merchandise they were buying. The researcher intercepted people who bought an AHM-related product with the potential to influence travel (e.g., a calendar or book as opposed to a bottle of water), and gathered some basic information, including an email address, to follow up with an email and link to the online questionnaire. The AHM shopper questionnaire requested information in order to determine AHM product impacts on travel.

A survey link was posted several times through late spring to early fall 2019 on the AHM Facebook page; the survey was similar to the subscriber and AHM shopper instruments. The Facebook survey respondents comprise a convenience sample, and although it cannot be considered a random, representative sample, this convenience sample can provide insights into the influence of the AHM Facebook page on travel and spending information.

Viewers of *Arizona Highways TV* participated in focus group discussions. Participants were solicited through the subscriber and AHM shopper survey efforts, as well as through the AHM Facebook page, which requested that those interested provide their contact information. Two in-person focus groups were held: one in Phoenix on the evening of May 7, 2019, and one in Tucson on the evening of May 8, 2019. An online focus group was held on the evening of May 22, 2019, using video conferencing. Representatives of the research team facilitated the focus groups. Each focus group had two facilitators and at least one assistant. The primary facilitator asked questions and involved each participant in the discussion. The assistant wrote comments on flip charts and audio-recorded the sessions. The sessions lasted one hour to 90 minutes.

The economic impact analyses used the numbers of subscribers and *AHM* shoppers along with spending and travel behavior data to ascertain visitor spending in Arizona. Tourist visitation and spending data were self-reported on the surveys within several categories for the most recent overnight visit to/in Arizona in the past year. Three key pieces of information are required to estimate economic impact: 1) the number of visitors from other states who visit on overnight trips and overnight visits by Arizona residents in a one-year time period, 2) visitor spending patterns in Arizona, and 3) regional economic multipliers that describe the economic effects of visitor spending in the local area.

Determining the annual impact of the *Arizona Highways* brand is more complicated, however. In addition to the aforementioned pieces of information, other data are required: the average number of visits in a year, as most visitors take multiple trips, and the extent to which visits can be directly attributed to the *AHM* brand. Average visits per year, inferred from a five-year average, and percentage of those visits influenced by *AHM* are extrapolated to the entire population and their annual visits. With a license purchased by the ASU Center for Sustainable Tourism, IMPLAN software was used to analyze and model economic impact of the subscriber and *AHM* shopper surveys.

Conclusion

Approximately every seven years (2005, 2012, 2020), the impacts of the *Arizona Highways Magazine* on the state's economy and travel patterns have been estimated using primary survey research. Across samples drawn from full lists of subscribers and shoppers, a range of 26 to 41 percent response rates resulted. In this most recent study, Facebook page users and television show viewers were added to the study to gain a more comprehensive view of the effects of *AHM* and related media on travel. These studies represent a consistent and thorough evaluation effort that is quite uncommon.

Surveys enable the magazine staff and Arizona Department of Transportation to evaluate the business model of the *AHM* brand. The results of this study showcase strong economic effects to state and local governments through travel spending that generates taxes; and spending across the state, particularly in places featured in the magazine and products. The subscribers, shoppers, and Facebook users rate the *AHM* brand as strong and positive. Over half of the subscribers, both out-of-state and in Arizona, were quite certain that they will re-subscribe to the magazine. Overall, the *AHM* and its related products are an asset to the state of Arizona. Important photographers and writers help showcase the state's beauty, unique landscape, and history and culture while featuring people and the businesses they operate that support travel.

References

- Andereck, Kathleen L. 2012. *The Impact of Arizona Highways Magazine on Tourism*. FHWA-AZ-12-686-1. Phoenix: Arizona Department of Transportation.
- Andereck, Kathleen L. and Evelyn Ng. 2005. *Arizona Highways Magazine's Impact on Tourism*. Phoenix: Arizona Department of Transportation.
- Carnoy, Juliet 2017. "5 Ways Social Media Has Transformed Tourism Marketing." *Entrepreneur*, <https://www.entrepreneur.com/article/286408>.
- Cooper, Thomas C. 1974. "Arizona History in Arizona Highways: An Annotated Bibliography (Part I)." *Arizona and the West* 16(1): 33-64.
- Crockett, S. R., and L.J. Wood. 1999. "Brand Western Australia: A Totally Integrated Approach to Destination Branding." *Journal of Vacation Marketing* 5(3): 276-289.
- Dillman, Don A. 2000. *Mail and Internet Surveys*. New York: John Wiley and Sons, Inc.
- Goeldner, Charles R. and J.R. Brent Ritchie. 2007. *Tourism: Principles, Practices, Philosophies*. New York: John Wiley and Sons, Inc.
- Greenwood, Jerusha B. and Candace G. Vick. 2008. *Economic Contribution of Visitors to North Carolina State Parks*. Raleigh, NC: North Carolina State University.
- Gunthar, Peter, Kathryn Parr, Marcello Graziano, and Fred Carstensen. 2011. *The Economic Impact of State Parks, Forests, and Natural Resources under the Management of Department of Environmental Protection*. Stores: Connecticut Center for Economic Analysis, University of Connecticut.
- Hjerpe, Evan E. 2018. "Outdoor Recreation as a Sustainable Export Industry: A Case Study of the Boundary Waters Wilderness." *Ecological Economics* 146: 60-68.
- IMPLAN. 2014. *Principles of Impact Analysis and IMPLAN Application*. IMPLAN GROUP, LLC: Huntersville, NC
- Jun, Soo Hyun, Christine A. Vogt, and Kelly J. MacKay. 2007. "Relationships between Travel Information Search and Travel Product Purchase in Pre-trip Context." *Journal of Travel Research* 45(3): 266-274.
- King, John. 2002. "Destination Marketing Organizations: Connecting the Experience Rather than Promoting the Place." *Journal of Vacation Marketing* 8(2): 105-108.
- Kotler, Philip, John T. Bove, and James Makens. 1996. *Marketing for Hospitality and Tourism*. Upper Saddle River NJ: Prentice Hall.
- McGrath, John M., David Primm, and William Lafe. 2016. "Heritage Tourism's Economic Contribution: A Pennsylvania Case Study." *Tourism Economics* 1-7.
- Middleton, Victor T.C., Alan Fyall, and Michael Morgan. (2009) *Marketing in Tourism and Travel*. Amsterdam: Butterworth-Heinemann.
- Morgan, Nigel J. and Annette Pritchard. 2005. "(PR)omoting place: The Role of PR in Building New Zealand's Destination Brand Relationships." *Journal of Hospitality and Leisure Marketing* 12 (1-2): 157-76.
- Moutinho, Luiz. 1987. "Consumer Behavior in Tourism." *European Journal of Marketing* 21: 6-11.

- Munn, Ian A., Anwar Hussain, Stan Spurlock, and James E. Henderson. 2010. "Economic Impact of Fishing, Hunting, and Wildlife- Associated Recreation Expenditures on the Southeast U.S. Regional Economy: An Input-Output Analysis." *Human Dimension of Wildlife* 15: 433-449.
- Social Samosa. 2014. The Impact of Social Media on Travel and Tourism. Website. Accessed November 2020. <https://www.socialsamosa.com/2014/09/social-media-travel-tourism/>
- Souza, Thiago do Val Simardi Beraldo, Brijesh Thapa, Camila Gonçalves de Oliveira Rodrigues, and Denise Imori. 2019. "Economic Impacts of Tourism in Protected Areas of Brazil." *Journal of Sustainable Tourism* 27(6): 735-749.
- Stynes, Daniel, Dennis Propst, W. Chang, and Ya-Yen Sun. 2000. *Estimating National Park Visitor Spending and Economic Impacts; the MGM2 Model*. East Lansing, MI: Michigan State University.
- The Trust for Public Land. 2010. *The Economic Benefits of Denver's Park and Recreation Systems*. Denver, Colorado: The Trust for Public Land's Center for City Park Excellence.
- U.S. Travel Association 2018. *Made in America: Travel's Essential Contribution to Economic Development*. Washington DC: Travel Association.
- Yacout, Omneya M. and Lamiia I. Hefny. 2015. "Use of Hofstede's Cultural Dimensions, Demographics, and Information Sources as Antecedents to Cognitive and Affective Destination Image for Egypt." *Journal of Vacation Marketing* 21(1): 37-52.