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# The Importance of Traveler Spending on Locally Produced Goods and Services

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## Introduction

The economic impact of the tourism industry is certainly a much sought-after figure for countries, states, provinces and communities and is estimated using a variety of models such as IMPLAN (Crompton, Jeong, and Dudensing 2015), tourism satellite accounts (Rasgab and Meis, 2016), Proportional Multiplier Analysis (Vaughan, Farr, and Slee, 2000), mixed methods models such as those by Stynes (2000) to mention a few. These models use a variety of data sources, for example county or statewide economic census data, visitor spending data, or business revenue data.

Within economic impacts, economists refer to leakages as an important component to recognize when estimating the impact of spending by visitors in a locale. Leakages refer to the dollars leaving an area because the products purchased by visitors are produced outside of the local region. The key is that the smaller the leakages the higher the economic effect (Vaughan, Farr, and Slee, 2000). Therefore, locally made items and local services sold to visitors produce a much higher impact to the region. But, do the aforementioned estimation models produce an accurate measure of what was made and then purchased locally by visitors?

## Purpose

The purpose of this study was to look specifically into categories of traveler expenditures to estimate the purchases of locally produced products.

## Literature Review

Expenditure studies are essential to understanding visitor purchases while traveling (Wilton and Nickerson, 2006), and understanding these visitor expenditures provides information for decision making by residents, businesses, and governments for tourism development and marketing (Frechtling, 2006 pg. 26). The direct spending by tourists within a community or at an event is then used as the primary information to deduce the total economic impact that tourism has within the community and is a common and acceptable practice (Chhabra et al. 2003; Tyrrell and Johnston, 2001). Since these studies are generally used to maximize tourism expenditures for economic development (Kalber, 1980; McGehee, 2007), the more detail gathered about the types of expenditures can assist in the refinement of that development.

Interestingly, the typical details obtained about types of spending behavior by visitors is usually assessed by broad categories such as accommodation, retail purchases, restaurant and bar, services, and 'other' purchases (Wilton and Nickerson, 2006). And yet, according to Disegna and Osti, (2015) different tourist expenditure categories are an under-researched topic. Noting the 'place of origin' and 'type of products and services' can further establish the strength or weakness of the economic leakage to an area. In a 2009 article in TIME magazine, money was likened to the blood of an economy. "It needs to keep moving around to keep the economy going...it flows out, like a wound" when goods and services are purchased from non-locally owned business (Schwartz, 2009).

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Recently, Nickerson, Jorgenson, and Boley (2016) found that spending by the strong geotraveler was higher than the travelers with a lower geotraveler tendency, hinting that certain types of travelers' purchases are different than others. Since geotourism has been defined as sustaining and enhancing the local geographical character of place- including the environment, culture, aesthetics, heritage and well-being of the local people (Boley, Nickerson & Bosak, 2011; Boley and Nickerson, 2013; Jorgenson and Nickerson (2015), and geotourism encourages behaviors such as buying local products, then the type of visitor could also be important to improving local economies. According to Bader (2015), these travelers attempt to keep their purchases in alignment with their beliefs, particularly if they view themselves as sustainable travelers. But, the specificity of their purchases have not been recorded and studied for their direct impact.

In the state of Montana, marketing to geotravelers became a statewide effort over the past 10 years in the hopes of increasing spending and keeping the impact local. However, previously collected expenditure data could neither support nor refute this assumption because it lacked the detail necessary for this type of analysis. More information was needed to determine if travelers in Montana do, in fact, purchase local items, and to understand how much of the money they spent in the state went toward such purchases. In an effort to achieve this, nonresident survey respondents were asked if they purchased "Made in Montana" items while in the state during 2015 rather than being asked simply what they spent on retail. With the collection and analysis of this information, it is possible to begin answering the questions of 1) if travelers in this state, who are widely accepted as being geotravelers, are making purchases of local goods/services, 2) if so, how much of their spending is going toward such purchases, and 3) what, specifically, are they purchasing?

## Methods

On-site visitor intercepts of nonresident travelers in Montana were conducted on random days and times at a random sample of gas stations and rest areas throughout the state as well as at each of the seven airports from January through September of 2015. In that time period, 11,807 nonresidents were intercepted and asked about their spending over the past 24 hour period. While in Montana, the day of the travelers visit could have been the first, last, or any day in-between providing a randomized representation of all possible expenditures while people visit the state.

## Survey design

Surveys are designed by ITRR personnel and loaded on iPads for the nine surveyors located around the state. Data were gathered for the following expenditure categories: campground (public and private); hotel, motel, bed and breakfast; rental cabin; gasoline, diesel; restaurant, bar; farmers market; grocery, snacks; made in Montana products; retail; outfitter and guide; auto rental; vehicle repair; transportation; licenses, fees, admissions; gambling; services. Respondents were asked to round to the nearest dollar; zero was recorded for categories in which respondents indicate no spending occurred.

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In order to produce estimates of statewide nonresident traveler spending, expenditure data was first cleaned to ensure that all types of spending had been reported in the appropriate categories. If any exceptionally large expenditures were noted within a category (e.g. a house purchased for \$200,000), those expenditures were temporarily removed from the data so as not to inflate the mean expenditure for the category during the delimiting process. The data was delimited to three standard deviations plus the mean (calculated for each expenditure variable in SPSS); and reported expenditures higher than that amount were reduced to the delimited cutoff amount. If any very large expenditure was removed, as described above, those were replaced with the delimited cutoff amount.

After delimiting the expenditure data, the mean of each delimited variable was observed, and represents the average daily spending per travel group. The results of the analysis are presented in the following section.

## Limitations

This study was limited to Nonresidents visiting Montana Between January 1 and September 30, 2015.

## Response rate

Response rates for this type of data collection ranges between 94 to 97 percent.

## Results

Table 1 shows average daily spending by all nonresident travelers during quarters 1-3, 2015. Asking survey respondents explicitly about their purchases of Montana-made items, farmer's markets, and locally guided trips allowed for observations and comparisons within the sample that were not previously possible.

Montana is a large state where a trip to the next 'large' town is many time 120 miles or more so it is not surprising that fuel purchases were the highest among all expenditure categories. Four of the top five expenditure categories reveal the basic visitor needs while traveling excluding the retail purchases. The next two highest spending categories included local purchases of guided trips and made in Montana products indicating that locally made products and services appear to be a sought after purchase by nonresidents to the state.

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**Table 1: Average Daily Group Spending in Montana by Nonresident Travelers, Q1-3, 2015**

<b>Expenditure Category</b>	<b>Average Daily Group Expenditure (n=11,807)</b>
Gasoline, Diesel	\$29.82
Restaurant, Bar	\$26.72
Hotel, B&B, etc.	\$17.97
Retail	\$16.45
Groceries, Snacks	\$12.45
<b>Outfitter, Guide</b>	\$12.01
<b>Made in Montana</b>	\$10.20
Licenses, Entrance Fees	\$9.89
Auto Rental	\$3.23
Rental Cabin, Condo	\$3.23
Campground, RV Park	\$1.69
<b>Farmers Market</b>	\$0.91
Misc. Services	\$0.88
Auto Repair	\$0.87
Gambling	\$0.73
Transportation Fares	\$0.04
<b>Total</b>	<b>\$147.11</b>

In order to look more closely at expenditures made on locally produced goods and services, as well as to look into which travelers make those purchases, the data was segmented based on whether or not respondents made purchases in one or more of the following categories: made in Montana products; farmers market items; outfitter and guide services. Table 2 displays a side-by-side comparison of average daily group expenditures for those who did spend on Montana-made goods or services versus those who did not.

As shown in Table 2, 16 percent of travelers purchased locally made products or services and spent nearly \$184 more than the traveler who did not spend on those products. Clearly, the amount spent by those who purchased Montana-made goods and services is significantly higher. The only category for which spending was not higher was in the gasoline and diesel expenditure category.

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**Table 2: Average Daily Group Spending in Montana by Nonresident Travelers, Q1-3, 2015: Groups who spent on Montana-made Goods & Services vs. Groups who did not**

<b>Expenditure Category</b>	<b>Spent on Montana-made Goods/Services (n=1,942)</b>	<b>Did Not Spend on Montana-made Goods/Services (n=9,865)</b>
	<b>Average Daily Group Expenditure</b>	<b>Average Daily Group Expenditure</b>
Made in MT	\$52.92	--
Farmers Market	\$4.72	--
Outfitter, Guide	\$62.32	--
Gasoline, Diesel	\$19.95	\$32.18
Restaurant, Bar	\$42.88	\$22.85
Hotel, B&B, etc.	\$20.59	\$17.35
Retail Sales	\$25.15	\$14.38
Groceries, Snacks	\$19.39	\$10.80
Licenses, Entrance Fees	\$26.55	\$5.91
Auto Rental	\$6.86	\$2.36
Rental Cabin, Condo	\$7.86	\$2.12
Campground, RV Park	\$2.74	\$1.44
Misc. Services	\$1.57	\$0.72
Auto Repair	\$1.68	\$0.68
Gambling	\$0.92	\$0.68
Transportation Fares	\$0.13	\$0.02
<b>Total</b>	<b>\$296.25</b>	<b>\$111.49</b>

To further our understanding of this spending group, we analyzed trip characteristics of the two groups including group size, group type, length of stay, purpose of trip, residence, and method of entry into the state. The differences between groups of travelers who purchased Montana-made goods and service and those who did not are displayed in Table 3.

Visitors purchasing Montana made products and services were more likely to be on vacation, were domestic travelers, and flew into Montana. Adding to these differences was the length of stay. Visitors who purchased local products and services stayed, on average, 4.39 nights longer than those who did not purchase locally. The Canadian visitor was also one who did not purchase local products and services indicating that our neighbors to the north are here more likely to pass through the state.

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**Table 3: Comparison of Travel Group Characteristics**

	Spent on Montana-made Goods/Services	Did Not Spend on Montana-made Goods/Services
<b>Average Group Size</b>	2.45	2.21
<b>Average Length of Stay (nights)</b>	8.17	3.78
<b>Main Purpose for Trip to MT</b>		
Vacation, recreation, pleasure	59.2%	33.3%
Visiting friends, relatives, family event	20.7%	16.1%
Just passing through	7.8%	33.9%
Shopping	0.4%	2.2%
Business	9.8%	12.0%
Other	2.2%	2.5%
<b>Residence</b>		
Domestic	92.1%	84.2%
Canadian	5.9%	14.1%
Other international	1.9%	1.8%
<b>Travel Party Type</b>		
Self	24.9%	30.2%
Couple	36.3%	36.4%
Immediate Family	26.1%	21.2%
Extended Family	2.5%	1.8%
Family & Friends	3.3%	2.8%
Friends	5.8%	5.7%
Business Associates	0.9%	1.6%
Organized Group or Club	0.3%	0.2%
<b>Method of Entry into MT</b>		
Auto/Truck	58.5%	76.7%
RV/Trailer	12.1%	10.8%
Air	24.2%	7.6%
Motorcycle	1.7%	3.1%
Bus	0.1%	0.1%
Train	0.4%	0.3%
Other	3.1%	1.4%

Finally, it was deemed important to analyze the types of local products purchased by visitors to both understand the current market and perhaps to see where gaps in purchases may be occurring. As shown in Table 4, a wide variety of “Made in Montana” items are purchased by travelers indicating that an assortment of businesses benefit from visitors. Table 4 illustrates more specifically what types of items are purchased and how many of those purchases are included in the sample.



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Local food items are purchased at a higher rate than any other item. These food items include the much sought after huckleberry candies, pies, jams, and desserts. Huckleberries are found only in the wilds of the mountains and individuals have to climb mountains to harvest the berries. Locally brewed beers and distilleries have become one of the latest in small manufacturing items that are also a big hit with the nonresident traveler. This is followed by locally made toys and other types of souvenirs and then the crafts and artists' products that range from low to very high expenditures by the visitor is the fourth most likely purchased local product.

**Table 4: "Made in Montana" Goods Purchased by Nonresident Travelers, Q1-3, 2015**

Local item purchased	# of reported purchases
Food (huckleberry items, baked goods, candy)	710
Beer/alcohol	640
General (toys, souvenirs, etc.)	415
Arts & crafts	138
Clothing	90
Jewelry	59
Sporting goods (fishing flies, etc.)	32
Health & beauty (lotion, soaps)	21
Furniture (log bed, table, etc.)	8

## Conclusion and Discussion

While a growing tourism industry is beneficial to the state, it is important that the industry grows in a way that is sustainable and desirable to the local people. One component of sustainability is the economic contribution made to the state while at the same time benefitting the local community by reducing the leakages of money. This study was conducted in Montana where the Office of Tourism has tailored their marketing efforts to attract geotransporters to the state. Geotransporters have been found to be a significant portion of visitors to Montana (Boyle and Nickerson 2010) and buying local products is part of the geotransporter spending behavior (Jorgenson and Nickerson, 2015).

The results of this study showed that visitors who purchased 'made in Montana' products, items at local farmer's markets, and who used local guides spent \$184.76 more than those visitors who did not purchase those products and services. This significant difference in spending between the two groups indicates that marketing to geotransporters will indeed keep more money local, reduce the leakage and provide jobs for residents of the state. As suggested by Tavares and Neves (2016), to be able to identify the type of tourist who can contribute more to the economic growth and development of the tourist destination is a bonus to businesses, residents, and marketers.

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