

**The Economic Impact of Motorcoach Tourism in West Virginia**



**Prepared by  
GuerrillaEconomics, LLC**

**Prepared for  
The American Bus Association Foundation  
The West Virginia Division of Tourism**

**February 12, 2007**

## Executive Summary

- ❖ About 356 companies sent as many as 7,400 motorcoaches to West Virginia in 2006. These buses carried about 44,300 overnight guests and 243,000 day-trippers.
- ❖ A total of \$40.3 million was spent on or by guests coming to West Virginia by bus in 2006. Of this, \$10.2 million on food and beverages, \$10.2 million on admissions fees to attractions, \$7.2 million was spent on retail purchases, and over \$6.1 million on accommodations.
- ❖ Motorcoach operators spend as much as \$3.2 million in West Virginia on operational expenses like fuel, parking or repairs.
- ❖ This \$40.3 million in spending supported as many as 1,300 jobs in the local economy (see table below). The total economic impact of motorcoach tourism was nearly \$37.3 million.

### Summary of Total Economic Impact<sup>1</sup> by Industry Motorcoach Tourism in West Virginia

Industry	Employment	Value Added	Compensation
Totals	1,292	\$ 37,270,575	\$ 27,877,464
Performing arts companies	364	\$ 2,317,541	\$ 2,126,552
Food services and drinking places	255	\$ 4,969,007	\$ 3,538,608
General merchandise stores	171	\$ 6,417,770	\$ 3,851,782
Hotels and motels- including casino hotels	101	\$ 4,497,234	\$ 2,559,406
Other amusement, gambling, and recreation	52	\$ 2,217,080	\$ 1,234,828
All Other	349	\$ 16,851,943	\$ 14,566,288

- ❖ It is estimated that \$3.95 million in state and local tax revenues were generated from motorcoach based tourism in the State. Of this \$1.659 million came from sales and use taxes, just over \$1 million from property taxes and about \$450,000 from income taxes.

### Summary of Total Economic Impact by Tour Type

Trip Type	Average Number of Passengers	Average Package Price	Additional Spending Per Passenger	Local Percentage	Total Impact
Day Trip	38.84	\$ 66.46	\$ 53.93	81%	\$ 3,800.70
One Night Trip	38.87	\$ 145.01	\$ 69.43	92%	\$ 7,706.07
Two Night Trip	38.87	\$ 290.01	\$ 138.86	92%	\$ 15,412.14
Three Night Trip	38.87	\$ 435.02	\$ 208.30	92%	\$ 23,118.20
Four Night Trip	38.87	\$ 580.03	\$ 277.73	92%	\$ 30,824.27

- ❖ The average day trip to West Virginia brings about \$3,800 to the local economy, while the average overnight bus trip generates and impact of just over \$7,700.
- ❖ Even though the economic impact of motorcoach tourism is concentrated, 115 different industries are significantly impacted by either motorcoach based tourists or bus operations.
- ❖ The jobs supported by motorcoach tourism tend to be those held by many of the state's lower income residents. In fact, nearly 20 percent of the jobs are in the restaurant and bar sector, an area that tends to employ many people who are just entering the labor force.

<sup>1</sup> Value added is not always equal to spending. For example, if a tourist purchases a t-shirt from a Wheeling retailer for \$10, it is likely that most of the actual value of the item was generated in another location. For example, if the shirt was manufactured in North Carolina, designed in New York City and warehoused in Cleveland only the part of the \$10 added by the retailer (likely about \$2.50) is included in this \$37 million figure. Employee compensation is included in value added. Compensation is equal to wages and benefits to employees in the defined industry.

## Introduction

With over 1.8 million residents, West Virginia, comprises the nation's 37th largest state. From unmatched outdoor recreation to world-class resorts, breathtaking scenery and a variety of cultural and historic attractions, West Virginia is home to some of the nation's premier tourism destinations including the Greenbrier Resort, Harper's Ferry National Historic Park and the Oglebay Resort.

It has been estimated that the State hosts over 11.2 million visitors per year.<sup>2</sup> According to a report commissioned for the Division of Tourism, the travel industry in West Virginia generates some 41,000 jobs and provides \$1.56 billion to the local economy.<sup>3</sup>

One of the ways that tourists visit West Virginia is by motorcoach. In fact, based on the analysis presented in this paper, it is estimated that over 287,000 tourists visit the state on a motorcoach based tour each year (either on a day-trip or as an overnight visitor). This does not count passengers on intra-city based tours (for example those traveling from Wheeling to Morgantown for a football game).

Tourists visiting attractions and events in West Virginia can provide significant economic benefits to local businesses, generate sales and excise tax revenues for state and its constituent cities and the county, and provide needed attendees for cultural attractions also frequented by local residents. All of these activities serve to stimulate the state's economy.

The purpose of this report is to quantify the linkages between motorcoach based tourism and the state economy and to document their economic contributions to the people of the Mountaineer State. In order to examine this impact, telephone interviews were conducted with motorcoach carriers to collect data on the number and duration of tours, lodging information, and other spending. The data were combined with information collected from a self-administered survey of visitors, and analyzed using a regional input-output model developed by the Minnesota IMPLAN Group to calculate the full economic impact of the motorcoach tourism in West Virginia.

The results suggest that these visitors make a significant contribution to the state's economy both in terms of outputs and jobs. They bring in a substantial number of visitors who stay in local hotels, make purchases including admissions tickets, food, gasoline, and general merchandise. This initial spending amounts over \$40.3 million. The economic impact of this spending on West Virginia is nearly \$37.3 million, generating as many as 1,300 regional jobs and almost \$3.95 million in tax revenues.<sup>4</sup>

---

<sup>2</sup> Data for 2005. Source: Longwoods International

<sup>3</sup> *Economic Impact of Travel on West Virginia 2000-2004 Detailed State and County Estimates*, prepared for the West Virginia Division of tourism by Dean Runyan Associates, June 2005.

<sup>4</sup> Full-time equivalent positions.

## Background

This report focuses on the economic impact of motorcoach based tourism in West Virginia. GuerrillaEconomics, LLC was commissioned by the State of West Virginia and the American Bus Association Foundation to conduct this research in the fall of 2006. This analysis is based on data collected from a telephone survey of 29 bus operators, and user initiated surveys of passengers on tours to the state. Data were collected during the fall and early winter of 2006.

This is the fifth in a series of reports sponsored by the ABA Foundation examining the economic impact of motorcoach tourism on specific destination markets. The first, which was released in January 2002, examined the impact in Washington, D.C., Lancaster, Pennsylvania, and New York City. The second report, which was released in June 2005, examined data for Chicago Illinois. Both of these reports were conducted by students and professors from the George Washington University, and presented data on total spending by motorcoach tourists in each of the venues. In the summer of 2006, we presented the results from a report examining the economic benefits of motorcoach based tourism on the Greater Cleveland area, and in December 2006, one examining the Pittsburgh region. The analysis presented in this report is similar to that research.

This analysis, examines similar data for the state of West Virginia. It is based on extensive surveys of motorcoach operators and passengers in the market. The data are then imported into an input-output model of the state's economy and estimates of total economic impact, employment, wages and tax revenues are calculated. The analysis uses a comprehensive input-output modeling framework first developed by the US Government and now maintained by the Minnesota IMPLAN Group. This is one of the standard methodologies used in economic impact modeling.

Data gathered from the surveys conducted by GuerrillaEconomics staff, along with additional information from: the West Virginia Division of Tourism, the American Bus Association Foundation, Dun & Bradstreet, and other sources were used in this analysis. Statistical tests were performed on data and models to insure consistency and accuracy. Summary results were compared to prior surveys of motorcoach tourism to Cleveland and to the Chicago area to ensure that they were within normal parameters. The table below compares estimates of total sales from the projected number of motorcoach tourists from three different sources. The results from this study are higher than estimates from a 2005 study done for the Greater Cleveland CVB, and slightly lower than those found in a George Washington University analysis of tourism in the Chicago market.<sup>5</sup>

### Comparative Sales Statistics

	Day Trip Sales	Overnight Sales	Total Sales
Chicago GWU Study	\$ 33,793,411	\$ 15,423,473	\$ 49,216,884
Greater Cleveland Study (Guerrilla Economics)	\$ 19,866,748	\$ 4,819,471	\$ 24,686,219
West Virginia Division of Tourism Study	\$ 16,145,991	\$ 21,289,243	\$ 37,435,234

<sup>5</sup> Neirotti, Lisa Delpy, Bus Tours and Bus Passengers: Impact on Chicago's Economy, prepared for the American Bus Association Foundation, Washington, D.C. May 2005. To allow for comparison between different studies, these values represent tour package prices – some portion of which is not spent in West Virginia. This figure is not used in the impact analysis.

This analysis also conforms to provisions outlined in the economic literature pertaining to the impact of the tourism industry. Generally, tourism is defined as a set of socio-economic activities carried out either by or for tourists. Tourism is primarily a consumption activity. Therefore, the size of tourism in an economy is often measured by total expenditure in the economy for tourism purposes.<sup>6</sup> Tourism has both a demand side and a supply side; however, to correctly measure the size of tourism and estimate tourism's contribution to GDP, an input-output framework should be used.

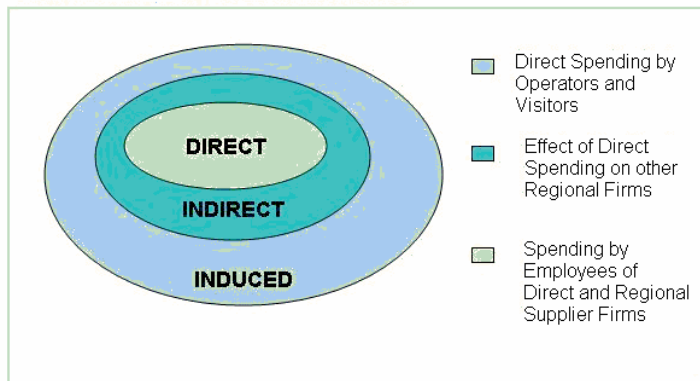
---

<sup>6</sup> See: Han, Xiaoli, and Bingsong Fang, *Measuring the size of tourism and its impact in an economy*, Statistical Journal of the UN Economic Commission for Europe; Vol. 14, Issue 4, 1997 and Vaughn, D.R., et. al., *Estimating and interpreting the local economic benefits of visitor spending: an explanation*, Leisure Studies, Volume 19, 2000.

## Methodology

The economic impact analysis of motorcoach tourism in West Virginia begins with an accounting of spending in the various sectors of the economy. Tourism is not a defined industry like steelmaking, or publishing, but rather encompasses a wide range of companies in many parts of the economy. As such, the definition of tourism can be interpreted differently depending on the context of the analysis.

In this case, the motorcoach tourism industry is defined as all spending by non-scheduled motorcoach operators and passengers on visits to the state. The analysis does not include spending by passengers to West Virginia on scheduled service by common carriers or on intra-regional travel such as on transit buses. The analysis includes spending on operations, lodging, food and beverages, admissions and incidentals in the state of West Virginia; however, it only includes spending directly related to passengers. If, for example a carrier has a regional repair facility located in Charlestown, while this certainly generates jobs, taxes and economic activity in the city, these impacts are not included in this particular analysis.



The data are based on responses to telephone based surveys with tour operators and mail-in surveys of passengers.

It is sometimes mistakenly thought that initial spending accounts for all of the impact of an economic activity or a product. For example, at first glance, it may appear that consumer expenditures for lunch at a restaurant

are the sum total of the impact on the local economy. However, one economic activity always leads to a ripple effect whereby other sectors and industries benefit from this initial spending. This inter-industry effect of an economic activity can be assessed using multipliers from regional input-output modeling.

The economic activities of events are linked to other industries in the state and national economies. The activities required to produce a lunch, from obtaining foodstuffs, to shipping, to purchasing natural gas for the stove generate the direct effects on the economy. Regional (or indirect) impacts occur when these activities require purchases of goods and services such as building materials from local or regional suppliers. Additional, induced impacts occur when workers involved in direct and indirect activities spend their wages in the region. The ratio between total economic and direct impact is termed the multiplier. The framework in the chart on the prior page illustrates these linkages.

There are a number of methods available for conducting an economic impact analysis; however, we believe that the input-output methodology is both the most appropriate and the easiest to understand. Unfortunately, this type of analysis is easily abused, and many studies are published

that present totally inflated and unrealistic “multiplier effects” of an industry or activity.<sup>7</sup> In this analysis we are careful to not only include the appropriate impacts, but are very cautious in our application of industry multipliers.

This method of analysis allows the impact of local production activities to be quantified in terms of final demand, earnings, and employment in the state.

Once the direct impact of the industry has been calculated, the input-output methodology discussed below is used to calculate the contribution of the supplier sector and of the re-spending in the economy by employees in the industry and its suppliers. This induced impact is the most controversial part of economic impact studies and is often quite inflated. In the case of the motorcoach model, only the most conservative estimate of the induced impact has been used.

---

<sup>7</sup>

We have reviewed a large number of other studies that present the economic impact of an activity as a series of spending cycles. When this is done, the direct and supplier impacts (often called induced impacts) are calculated in much the same way as we have in this study. The difference lies in the calculation of the induced impacts (the multiplier effect). While we conservatively define the induced impact to be solely the result of re-spending by the employees counted in the direct and supplier impact, many other analysts include round after round of supplier re-spending. In other words, if we were to calculate the economic impact of automobile manufacturing, we would include the production of glass for the windows and the re-spending on say household items by workers in the glass factory. We would not, however, include the economic impact of the sand and natural gas that went into the production of the glass, for this is not the economic impact of the automobile industry, but rather of the glass industry.

## Model Description and Data

This Economic Impact (Model) was developed by GuerrillaEconomics, LLC based on data provided by D&B, Inc., the West Virginia Division of Tourism, The American Bus Association Foundation and the federal government. The analysis utilizes the Minnesota IMPLAN Group Model in order to quantify the economic impact of the motorcoach based tourism on the state of West Virginia. The model adopts an accounting framework through which the relationships between different inputs and outputs across industries and sectors are computed. This model can show the impact of a given economic decision – such as a factory opening or operating a sports facility – on a pre-defined, geographic region. It is based on the national income accounts generated by the US Department of Commerce, Bureau of Economic Analysis (BEA).<sup>8</sup>

Every economic impact analysis begins with a description of the industry being examined. In the case of this model, the motorcoach tourism industry is defined as to incorporate firms in the following economic sectors:

- ❖ **Motorcoach Transportation:** Including firms that transport individuals from outside of the state into the area. The Motorcoach Transportation sector also includes company-owned offices and operations located within the region.
- ❖ **Lodging:** This includes hotels, motels, hostels and other operations involved in housing visitors West Virginia.
- ❖ **Eating and Drinking Places:** This includes all restaurant and bars selling food and beverages to visitors while in the state. Sales may be made directly to the carrier and be included in the package price, or may be made directly to the visitor themselves.
- ❖ **Retailing:** This includes firms involved in the sale of retail goods to motorcoach visitors. Model limitations preclude the inclusion of ABC stores, military stores, colleges, or other government owned outlets as part of the retailing sector.
- ❖ **Attractions and Events:** This includes firms involved in either the entertainment or educational industry. Organizations such as the West Virginia Symphony, museums, amusement arcades and parks, theaters are also included in this sector. This also includes all firms involved in either the visual or performing arts. It only includes spending by visitors, as all admissions fees are included in the Amusement sector. Finally, visitors to professional, amateur and semi-professional sporting teams and firms providing sports services to visitors such as private tennis courts or bowling alleys are included.
- ❖ **Gaming Revenues:** West Virginia is home to four casino racetracks. Estimated spending on games of chance at the casinos and tracks is included in Gaming Revenues.

---

<sup>8</sup> RIMS II is a product developed by the U.S. Department of Commerce, Bureau of Economic Analysis as a policy and economic decision analysis tool. IMPLAN was originally developed by the US Forest Service, the Federal Emergency Management Agency and the Bureau of Land Management. It was converted to a user-friendly model by the Minnesota IMPLAN Group in 1993.

- ❖ **Local Transportation:** This sector includes firms providing intra-regional transportation services to (mostly) overnight visitors. Firms operating taxicabs, local jitneys, or limousines would be included in this sector.
- ❖ **Personal Services:** This includes firms providing personal services to (mostly) overnight guests. Firms in this sector would include hair stylists, health clubs, dry cleaners, laundries and shoe shine stands.

Data were gathered from two separate surveys. The first consisted of an extensive telephone interview with 29 motorcoach operators. This is 8.1 percent of the estimated 356 carriers that operate tours in West Virginia.<sup>9</sup> This survey was enhanced with a self-administered survey of visitors to West Virginia taken over a three month period from October 2006 to December 2006. The data were statistically validated and entered into our model of the state's economy. More detail on the surveys and copies of the instruments are presented as an appendix to this report.

In addition to spending on or by tourists, estimates of motorcoach-company operating expenses were developed based on the multipliers and margins included in the IMPLAN model of the state of Pennsylvania. The model contains estimates of all of the components used in providing each dollar of motorcoach transportation. For example, 3.4 percent of each dollar generated by motorcoach operators is attributable to petroleum refining, and 2.3 percent to automotive parts and accessories.<sup>10</sup>

The IMPLAN Group model is designed to run based on the input of specific direct economic factors. It uses a detailed methodology (see Methodology section) to generate estimates of the direct, supplier and induced impacts, as well as federal, state and local tax collections resulting from the spending described above. In the case of this model, sales from motorcoach tourism and tourists are used as a base starting point for the analysis. Sales are estimated based on the results of the two surveys outlined in the Appendix. This data was supplemented by information provided to GuerrillaEconomics by Dun & Bradstreet, Inc. as of December 2006. Dun & Bradstreet data is recognized nationally as a premier source of micro industry data. The D&B database contains information on over 15 million businesses in the United States.<sup>11</sup> It is used extensively for credit reporting, and according to the vendor, encompasses about 98 percent of all business enterprises in the country. This data is gathered at the facility level; therefore, a company with a retail store, warehouse and sales office would have three facilities, each with separate employment counts.

The initial inputs for the model come from the spending estimates that come from the two surveys. This includes spending by motorcoach companies on services like lodging, food and beverages and admissions, as well as consumer spending on food, retail purchases, entertainment, personal services etc. In addition, the estimate of spending on motorcoach operations in West Virginia directly resulting from the transportation of tourists is included.

---

<sup>9</sup> This is the total number of carriers operating in West Virginia as defined by the ABA plus all additional carriers located within 600 miles of the state.

<sup>10</sup> Note that this represents in-state production of inputs to motorcoach operations.

<sup>11</sup> The D&B information database updates over 1 million times a day, over 350 million payment experiences are processed annually, and over 110 million phone calls are made to businesses. In addition, D&B uses a patented matching technology and over 2,000 information computer validations to ensure a high standard of data quality.

These spending estimates are entered into the appropriate industries in the model and either household (personal spending) or industry (company spending) margins are applied. All data and models are adjusted by inflation to 2006 dollars.<sup>12</sup>

Once the initial direct spending figures have been established, they are entered into a model linked to the IMPLAN database, with the appropriate marginal adjustments taken to ensure that the model is working solely off of consumer spending estimates. The IMPLAN data are used to generate estimates of direct wages and output in each of the sectors in the motorcoach tourism industry. Wages are derived from data from the U.S. Department of Labor's ES-202 reports that are used by IMPLAN to provide annual average wage and salary establishment counts, employment counts and payrolls at the county level. Since this data only covers payroll employees, it is modified to add information on independent workers, agricultural employees, construction employees, and certain government employees. Data are then adjusted to account for counties where non-disclosure rules apply. Wage data include not only cash wages, but health and life insurance payments, retirement payments and other non-cash compensation. It includes all income paid to workers by employers.

Total output is the value of production by industry in a given state. It is estimated by IMPLAN from sources similar to those used by the BEA in its RIMS II series. Where no Census or government surveys are available, IMPLAN uses models such as the Bureau of Labor Statistics Growth model to estimate the missing output.

The model also includes information on income received by the Federal, State and Local Governments, and produces estimates for the following taxes at the Federal Level: Corporate Income; Payroll, Personal Income, Estate and Gift, and Excise taxes, Customs Duties; and Fines, Fees, etc. State and local tax revenues include estimates of: Corporate Profits, Property, Sales, Severance, Estate and Gift and Personal Income Taxes; Licenses and Fees and certain Payroll Taxes.

The results of the model are presented in the following four sections of this report.

---

<sup>12</sup> Please note that the actual model relationships are as of 2003.

## Direct Impacts

Direct economic impacts are best defined as activities that one can actually count. Therefore, the direct economic impact of motorcoach tourism in West Virginia consists of those jobs and the economic activity generated by the initial spending by the over 287,000 visitors and 7,400 buses. The spending itself is not equal to the economic impact as much of the money will be paid out to regional, national or even international suppliers and will not stay in the state economy.

### Summary of the Size of the Motorcoach Tourism Industry West Virginia

Data Element	Value
Number of Companies	356
Number of Buses	7,396
Number of Visitors	287,283
Daytrip	242,961
Overnight	44,322
Spending By Category	
Lodging	\$ 6,107,603
Food and Beverage	\$ 10,248,495
Gaming	\$ 3,421,339
Retail Purchases	\$ 7,151,836
Arts and Admissions	\$ 10,165,195
Personal Services	\$ 20,146
Total Tourist Spending	\$ 37,114,614
Bus Company (fuel etc.)*	\$ 3,199,603
Total Spending in West Virginia	\$ 40,314,216
Spending Per Person	\$ 129.19
Bus Per Person	\$ 11.14

Note: Bus Company Spending Allocated to West Virginia 20.9 percent

The table above outlines the \$40.3 million in actual spending by motorcoach operators and tourists in West Virginia. About a fifth of this went for retail purchases and will not generate a great deal of activity in West Virginia proper. Other sectors such as spending on food and beverages, on the arts, or on lodging will have a greater impact on the local economy. On average, each visitor (or the company on a visitor's behalf) spent about \$129 in West Virginia. In addition, the motorcoach operators spent about \$11 on each passenger for items such as fuel, parking, or other supplies in the region.

The \$40.3 million in spending generated a direct economic impact in West Virginia of over \$23.4 million, and almost 1,025 jobs. Of these, about a third (35 percent) were with local arts companies and entertainment establishments, about a quarter (22 percent) were in local restaurants and bars, and one in 6 were in retail stores (see table on the following page).

## Economic Impact Motorcoach Tourism in West Virginia - Direct Effects

Industry	Employment	Value Added	Compensation
Totals	1,022.8	\$ 23,409,860	\$ 20,091,551
Performing arts companies	362.3	\$ 2,304,396	\$ 2,114,490
Food services and drinking places	227.9	\$ 4,444,707	\$ 3,165,235
General merchandise stores	163.6	\$ 6,141,425	\$ 3,685,927
Hotels and motels- including casino hotels	98.2	\$ 4,386,293	\$ 2,496,269
Other amusement- gambling- and recreation	50.2	\$ 2,145,110	\$ 1,194,743
State and local government passenger transit	49.5	\$ 234,142	\$ 2,106,751
Museums- historical sites- zoos- and parks	38.8	\$ 3,076,392	\$ 4,873,402
Transit and ground passenger transportation	31.3	\$ 632,114	\$ 431,084
Other Federal Government enterprises	0.4	\$ 36,423	\$ 20,306
Other personal services	0.2	\$ 6,563	\$ 3,049
Wood Products	-	\$ 17	\$ 13
All Other Industries	0.4	\$ 2,278	\$ 283

## Supplier and Induced Impacts

Economic activity started by motorcoach tourists generates output (and jobs) in hundreds of other industries, often in states far removed from the original economic activity. The impact of supplier firms, and the “Induced Impact” of the re-spending by employees of industry and supplier firms, is calculated using an input/output model of the United States.

### Economic Impact Motorcoach Tourism in West Virginia: Supplier Effects

Industry	Employment	Value Added	Compensation
Totals	94.0	\$ 4,689,033	\$ 2,759,636
Real estate	7.8	\$ 533,203	\$ 121,750
Wholesale trade	5.4	\$ 495,720	\$ 277,828
Employment services	4.8	\$ 109,732	\$ 107,692
Food services and drinking places	4.7	\$ 91,367	\$ 65,066
Maintenance and repair of nonresidential buildings	3.9	\$ 161,126	\$ 144,710
Business support services	3.7	\$ 85,324	\$ 65,464
Independent artists- writers- and performers	3.3	\$ 30,237	\$ 25,623
Other educational services	2.3	\$ 38,808	\$ 34,977
Architectural and engineering services	2.1	\$ 118,906	\$ 113,983
Accounting and bookkeeping services	2.0	\$ 86,619	\$ 81,150
Truck transportation	1.8	\$ 91,714	\$ 67,984
Services to buildings and dwellings	1.7	\$ 41,022	\$ 32,671
Spectator sports	1.6	\$ 25,086	\$ 22,271
Performing arts companies	1.6	\$ 9,936	\$ 9,117
Drycleaning and laundry services	1.4	\$ 37,124	\$ 28,726
Poultry and egg production	1.4	\$ 53,896	\$ 160
All Other Industries	44.5	\$ 2,679,213	\$ 1,560,464

About 94 additional jobs were with local supplier establishments. This generated an additional \$4.7 million in local economic activity. The largest supplier sectors in the state are in the real estate and wholesaling industries.

### Economic Impact Motorcoach Tourism in West Virginia: Induced Effects

Industry	Employment	Value Added	Compensation
Totals	174.8	\$ 9,171,795	\$ 5,026,362
Food services and drinking places	22.2	\$ 432,934	\$ 308,307
Hospitals	11.1	\$ 552,222	\$ 538,247
Offices of physicians- dentists- and other health	10.1	\$ 796,586	\$ 657,782
Nursing and residential care facilities	6.9	\$ 213,363	\$ 184,952
General merchandise stores	6.8	\$ 254,212	\$ 152,572
Food and beverage stores	6.5	\$ 226,984	\$ 145,119
Motor vehicle and parts dealers	5.7	\$ 337,008	\$ 218,505
Social assistance- except child day care services	5.6	\$ 89,807	\$ 87,158
Real estate	5.3	\$ 364,111	\$ 83,141
Wholesale trade	5.2	\$ 471,621	\$ 264,322
Private households	4.6	\$ 44,729	\$ 44,729
Automotive repair and maintenance	4.3	\$ 125,847	\$ 90,950
Miscellaneous store retailers	4.1	\$ 76,312	\$ 56,477
Nonstore retailers	3.9	\$ 83,953	\$ 39,398
Home health care services	3.1	\$ 91,131	\$ 81,139
Colleges- universities- and junior colleges	2.9	\$ 57,309	\$ 57,309
All Other Industries	66.5	\$ 4,953,667	\$ 2,016,257

Induced jobs are the result of re-spending in the local economy by employees of direct and supplier firms. For example, an employee of a hotel serving motorcoach tourists will purchase products like food, telephone services and housing in the local economy. This re-spending creates a “multiplier” effect and produces induced impacts in the state. There are about 175 induced jobs in West Virginia, mostly in the food service and medical sectors.

## Total Impacts

The table below presents details of the total impact of motorcoach tourism in the state of West Virginia. The firms most reliant on this activity are local performers and entertainment establishments. All told, 35 percent of the jobs and 20 percent of the economic activity is with casinos, museums and entertainers retailers and restaurants. Other industries that receive significant business from motorcoach tourism are restaurants and bars, retailers, transportation firms and wholesalers and hotels. Manufacturing industries are impacted as tourists and the companies involved in the tourism industry purchase goods manufactured by West Virginia based firms.

The total economic impact (presented here as value added) is lower than the actual spending in the state. That is because much of this spending is on retail goods, and most of the value embedded in these products comes from other states (or other countries) and does not add value to the West Virginia economy. For example, if a visitor purchases a t-shirt for \$10 from a local vendor, only a small fraction of that \$10 is attributable to local activities (mainly wholesaling, retailing, financing, etc.) The shirt itself may have been manufactured in North Carolina, or China, and the economic impact of that activity is properly allocated to that specific geography.

### Economic Impact Motorcoach Tourism in West Virginia: Total Effects

Industry	Employment	Value Added	Compensation
Totals	1,291.6	\$ 37,270,575	\$ 27,877,464
Performing arts companies	364.4	\$ 2,317,541	\$ 2,126,552
Food services and drinking places	254.8	\$ 4,969,007	\$ 3,538,608
General merchandise stores	171.0	\$ 6,417,770	\$ 3,851,782
Hotels and motels- including casino hotels	100.6	\$ 4,497,234	\$ 2,559,406
Other amusement, gambling, and recreation	51.9	\$ 2,217,080	\$ 1,234,828
State and local government passenger transit	50.5	\$ 239,114	\$ 2,151,481
Museums- historical sites- zoos- and parks	38.9	\$ 3,080,711	\$ 4,880,244
Transit and ground passenger transportation	32.0	\$ 645,534	\$ 440,236
Real estate	13.1	\$ 897,314	\$ 204,891
Hospitals	11.1	\$ 552,222	\$ 538,247
Wholesale trade	10.6	\$ 967,341	\$ 542,150
Offices of physicians- dentists- and other health	10.1	\$ 796,586	\$ 657,782
Food and beverage stores	7.1	\$ 247,226	\$ 158,061
Nursing and residential care facilities	6.9	\$ 213,363	\$ 184,952
Employment services	6.3	\$ 143,713	\$ 141,042
Motor vehicle and parts dealers	6.2	\$ 366,291	\$ 237,492
All Other Industries	156.1	\$ 8,702,527	\$ 4,429,711

The distribution of the impacts can also be looked at on a “per bus” or per-trip basis. Examining the data this way shows that the average day trip to West Virginia brings about \$3,800 to the state economy, while the average overnight bus trip generates an impact of just over \$7,700. Again, it should be noted that the impact on the West Virginia economy of an overnight tour is equal to about 92 percent of the actual amount spent on a trip, or in other words, for each dollar that a motorcoach tourist spends in the state, about 92-cents stays in the local economy.

### Summary of Total Economic Impact by Tour Type

<b>Trip Type</b>	<b>Average Number of Passengers</b>	<b>Average Package Price</b>	<b>Additional Spending Per Passenger</b>	<b>Local Percentage</b>	<b>Total Impact</b>
Day Trip	38.84	\$ 66.46	\$ 53.93	81%	\$ 3,800.70
One Night Trip	38.87	\$ 145.01	\$ 69.43	92%	\$ 7,706.07
Two Night Trip	38.87	\$ 290.01	\$ 138.86	92%	\$ 15,412.14
Three Night Trip	38.87	\$ 435.02	\$ 208.30	92%	\$ 23,118.20
Four Night Trip	38.87	\$ 580.03	\$ 277.73	92%	\$ 30,824.27

## Estimated Tax Impacts

The study also estimates taxes paid by the industry and its employees. Federal taxes include industry-specific excise taxes, business and personal income taxes, FICA, and unemployment insurance paid by those companies that make up the motorcoach tourism industry in West Virginia and their employees. State and local tax systems vary widely, and the IMPLAN model makes aggregated estimates. Direct state and local taxes consist primarily of sales based taxes, property taxes and income taxes from industry employees. As would be expected in an industry made up mainly of consumption based activities, sales taxes account for a large percentage of state and local tax revenue generated and equal about 29 percent of total sales to both consumers and motorcoach carriers.

In sum, motorcoach tourism is expected to generate about \$11.5 million in taxes in 2006, about two thirds of which are federal taxes. Looking at it another way, taxes account for about 31 percent of the industry impact, and state and local governments receive \$13.73 in tax revenues per passenger visiting West Virginia.

### Summary of Economic Impact Motorcoach Tourism in West Virginia Fiscal Effects

	Annual Estimate	Percent
Federal Taxes	\$ 7,643,930	65.95%
State and Local Taxes	\$ 3,945,814	34.05%
Sales Taxes	\$ 1,658,979	14.31%
Property Taxes	\$ 1,009,097	8.71%
Income Taxes	\$ 449,964	3.88%
Corporate Profit Taxes	\$ 72,194	0.62%
Other State and Local Taxes	\$ 755,580	6.52%
Total Taxes	\$ 11,589,744	100.00%

## Appendix Telephone Interviews of Companies

GuerrillaEconomics, LLC contacted 138 tour-bus operating companies and conducted extensive interviews with 29. Of these, 16 were identified by the ABA as being companies with operations in West Virginia, and most of the remaining firms were members of the organization. All told, it is estimated that 356 companies operate tour-buses in West Virginia.<sup>13</sup>

Data from these surveys was used to generate estimates of total spending by bus operating companies on visitors to the state for 2006. The average number of busses operated by the companies was 16 (the data were not highly skewed with the median number being 13.5). The companies averaged just over 26.5 employees.

The survey questions are presented below.

### ECONOMIC IMPACT STUDY SAMPLE QUESTIONS FOR TOUR OPERATORS

***Hello. My name is Heather Green. I am calling on behalf of the West Virginia Division of Tourism and the American Bus Association. We are conducting a survey of tour operators who carry passengers in the state of West Virginia. The survey will take no more than 5 minutes. Can you help me with this, or can I speak with someone who might be able to assist us.***

***Thank you. Just to let you know, I work for the firm GuerrillaEconomics. We have been selected by the West Virginia Division of Tourism and the American Bus Association to conduct this survey. All of your answers to these questions will be aggregated with those of other respondents – and all information will be kept strictly confidential.***

**First, I need to ask you, do you or have you in the past year operated buses in the state of West Virginia?**

**IF No>>**

**Are there any reasons that you could give to me why you do not operate tours in West Virginia?**

**<<Record any reasons given>**

**Thank you for your time.**

**If Yes>>**

**1. How many people in general to you carry on each bus tour to West Virginia?**

Enter Number of people:

**2. About how much do you charge per person (Daytrip/Overnight)?**

---

<sup>13</sup> Based on data from Dun and Bradstreet, 2005. There are 104 tour bus operating companies with operations within a 10 hour drive of the center of the 12 county region. This figure is used as a proxy for total operators, and the resulting total number of passengers calculated is about 40 percent greater than a 2005 estimate of room nights by the CVB.

Enter Dollar amount for package price per person:

**3. For overnight packages, are accommodations included in the tour?**

If yes, indicate dollar amount.

**4. Were food and beverages included in package?**

If yes, indicate dollar amount.

**5. Are admissions and other incidentals included in the package price?**

If yes, indicate dollar amount

**6. About how many tours do you book to West Virginia per year?**

Please enter number of tours.

**7. What are the top 3 destinations for your groups in West Virginia?**

Enter the names of cities.

**8. What percentage of your passengers on tours to West Virginia are:**

Please indicate:

Seniors,

Students,

General Population

Baby Boomers

Families

Grandparent/grandchildren

Guys and gals weekends

**9. About what percentage of your trips to West Virginia are gaming tours?**

**10. What percentage of your passengers on tours to West Virginia are:**

Daytrip

Overnight (for overnight how many days on average?)

**11. Do you produce a brochure?**

Please indicate yes or no

If Yes

**a. Does the brochure feature West Virginia?**

Please indicate yes or no.

**12. Is West Virginia a Destination or a pass-through for daytrips/overnight trips?**

Enter destination or pass through or both

**13. Do you serve West Virginia Seasonally?**

**13a. If Yes>>**

**What percent of your riders to West Virginia come in the:**

Summer

Winter

Spring

Fall

Now I'd like to ask you a little about The State of West Virginia as it pertains to your operating environment

**14. Are Facilities for motorcoaches in West Virginia adequate or inadequate? if inadequate get details**

**15. Can you identify specific problem areas that the Division of Tourism should address?**

**16. What facilities/infrastructure would you like to see improved?**

**17. How much do you value a stop at the state Welcome Center?**

Essential

Very Valuable

Somewhat Valuable

Not Very Valuable

Of No Use

**18. Can you identify any new trends or interests that The Division of Tourism should be looking to develop as a destination?**

**19. What is your preferred method to receive information about West Virginia?**

Direct mail

E-mail,

CD

Phone

**19. How do you utilize on-line information resources?**

Research (to find info about WVA)

Bookings (do you have a website that allows passengers to book travel)

Marketing

Promotions

**If Bookings is Yes:**

- 19a. What Percentage of your business is booked through on-line sources**
- 20. How important is on-line information to your business**
- 21. How do you let your marketing partners know that bookings have been made?**

Now I just need to ask a few questions about your company

- 22. How many busses do you operate by size?**
- 23. Can you tell me how many employees you have?**

***Thank you so much for your help. The American Bus Association will be making a copy of our final report available to you, and the West Virginia Division of Tourism will receive the information on how they can improve your operating environment.***

***In addition, we would like to send you a supply of survey forms within the next week or so. These cards should be distributed to passengers visiting West Virginia. They will allow us to collect information about the city from your passengers. We will reward them for taking the survey with \_\_\_\_\_.***


- 24. Would you be willing to distribute these surveys to passengers coming to West Virginia?**

***Thank you once again for your assistance with our survey.***

**Appendix**  
**Questionnaire Used for Personal Interviews**

In conducting this analysis for the ABA and The West Virginia Division of Tourism, GuerrillaEconomics, LLC, conducted a survey of motorcoach passengers on trips to the state. We sent over 600 surveys to passengers through the companies that we surveyed. Unfortunately, the response rate was not as high as we had expected. Only 45 completed surveys were received, representing a response rate of about 7.5 percent.<sup>14</sup>

The survey instrument used in the study is presented below.

 <p>Thank you for visiting West Virginia and for your assistance. This survey will take only a minute of your time and will help us to better serve visitors to the state. Please enter your responses below and drop the completed survey in the mail. <b>You will be entered to win a prize.</b></p> <p>Please remember, except where indicated, the answers should apply to you personally, not to other members in your party. The data collected will not be used for marketing purposes, and your individual responses will not be shared with anyone.</p> <p>Thank you again for your assistance.</p> <p>1) Was this a day or overnight trip? _____</p>	<p>How many people are in your party? _____</p> <p>How much did the tour package cost per person? _____</p> <p>Outside of the package price, how much did you spend on lodging during this trip? _____</p> <p>Outside of the package price, how much did you spend on food and beverages during this trip? _____</p> <p>Outside of the package price, how much did you spend on other retail purchases on this trip? _____</p> <p>Outside of the package price, how much did you spend on the following on this trip? (if nothing enter zero)</p> <p>Museums _____;</p> <p>Performing Arts _____;</p> <p>Special Events _____;</p> <p>Sports or Sporting Events _____;</p> <p>Gaming _____</p>
---	--

<sup>14</sup> Based on our estimate of over 287,000 visitors per year, about 23,900 tourists would visit West Virginia each month, or 71,820 during the three month survey period. Since only 45 surveys were returned, this represents 6-100ths of a percent of all travelers. This is a lower response rate than we would like; however, we have based our analysis on these responses, along with data from our survey of motorcoach operators.

Excluding what was included in the package price, how much did you spend on personal services such as salons, spas, internet, or dry cleaning during this trip?  
\_\_\_\_\_

Did West Virginia

- Meet your expectations;
- Exceed your expectations;
- Disappoint you

Would you recommend the city as a destination?  Yes;  No

Why did you choose West Virginia?

- The package;
- It's a new destination;
- You are a repeat visitor

What was your favorite attraction in West Virginia? \_\_\_\_\_

Please enter your contact information (email or phone) for the drawing for a piece of Blenko hand-blown Glassware:  
\_\_\_\_\_



[www.wvtourism.com](http://www.wvtourism.com)

1-800-CALL-WVA

---

Return to:

**John Dunham**  
**GuerrillaEconomics, LLC**  
**135 Willow Street #801**  
**Brooklyn, NY 11201**

## Appendix

### IMPLAN Methodology:<sup>15</sup>

Francoise Quesnay one of the fathers of modern economics, first developed the analytical concept of inter-industry relationships in 1758. The concept was actualized into input-output analysis by Wassily Leontief during the Second World War, an accomplishment for which he received the 1973 Nobel Prize in Economics.

Input-Output analysis is an econometric technique used to examine the relationships within an economy. It captures all monetary market transactions for consumption in a given period and for a specific geography. The IMPLAN model uses data from many different sources – as published government data series, unpublished data, sets of relationships, ratios, or as estimates. The Minnesota IMPLAN group gathers this data, converts it into a consistent format, and estimates the missing components.

There are three different levels of data generally available in the United States: Federal, state and county. Most of the detailed data is available at the county level, and as such there are many issues with disclosure, especially in the case of smaller industries, such as brewing. IMPLAN overcomes these disclosure problems by combining a large number of datasets and by estimating those variables that are not found from any of them. The data is then converted into national input-output matrices (Use, Make, By-products, Absorption and Market Shares) as well as national tables for deflators, regional purchase coefficients and margins.

The IMPLAN Make matrix represents the production of commodities by industry. The Bureau of Economic Analysis (BEA) Benchmark I/O Study of the US Make Table forms the bases of the IMPLAN model. The Benchmark Make Table is updated to current year prices, and rearranged into the IMPLAN sector format. The IMPLAN Use matrix is based on estimates of final demand, value-added by sector and total industry and commodity output data as provided by government statistics or estimated by IMPLAN. The BEA Benchmark Use Table is then bridged to the IMPLAN sectors. Once the re-sectoring is complete, the Use Tables can be updated based on the other data and model calculations of interstate and international trade.

In the IMPLAN model, as with any input-output framework, all expenditures are in terms of producer prices. This allocates all expenditures to the industries that produce goods and services. As a result, all data not received in producer prices is converted using margins which are derived from the BEA Input-Output model. Margins represent the difference between producer and consumer prices. As such, the margins for any good add to one. If, for example, 10 percent of the consumer price of lodging is from the purchase of electricity, then the electricity margin would be 0.1.

Deflators, which account for relative price changes during different time periods, are derived from the Bureau of Labor Statistics (BLS) Growth Model. The 224 sector BLS model is mapped to the 528 sectors of the IMPLAN model. Where data are missing, deflators from BEA's Survey of Current Businesses are used.

---

<sup>15</sup> This section is paraphrased from IMPLAN Professional: Users Guide, Analysis Guide, Data Guide, Version 2.0, MIG, Inc., June 2000.

Finally, one of the most important parts of the IMPLAN model, the Regional Purchase Coefficients (RPCs) must be derived. IMPLAN is derived from a national model, which represents the “average” condition for a particular industry. Since national production functions do not necessarily represent particular regional differences, adjustments need to be made. Regional trade flows are estimated based on the Multi-Regional Input-Output Accounts, a cross-sectional database with consistent cross interstate trade flows developed in 1977. These data are updated and bridged to the 528 sector IMPLAN model. Once the databases and matrices are created, they go through an extensive validation process. IMPLAN builds separate state and county models and evaluates them, checking to ensure that no ratios are outside of recognized bounds. The final datasets and matrices are not released before extensive testing takes place.