

**The Economic Impact
Of Travel on
Massachusetts Counties
2011**

A Study Prepared for the
Massachusetts Office of Travel and Tourism
By the
Research Department of the
U.S. Travel Association
Washington, D.C.
September 2012

PREFACE

This study was conducted by the Research Department of the U.S. Travel Association for the *Massachusetts Office of Travel and Tourism*. The study presents estimates of travel economic impact on Massachusetts in 2011 at the state and county levels. Estimates include travel expenditures, travel-generated employment and payroll income, as well as tax revenues for state and local governments. Direct domestic travel impacts are provided for the state and the 14 counties, while the international travelers' impact and the multiplier impact on Massachusetts are provided at the state level only. For the purpose of comparison, historical impact data are displayed in this report.

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INTRODUCTION

The study presents estimates of travel's economic impact on Massachusetts in 2011 at the state and county levels. Estimates include travel expenditures, travel-generated employment and payroll income, as well as tax revenues for state and local governments. Direct domestic travel impacts are provided for the state and the 14 counties. Additionally, international travelers' impact and the multiplier impact on Massachusetts are provided at the state level only. For the purpose of comparison, historical impact data is displayed in this report.

All estimates of the economic impact of travel contained in this report are the product of the U.S. Travel Association's Travel Economic Impact Model (TEIM), a proprietary economic model developed expressly to indicate the expenditures, employment, payroll, and tax revenue generated by travel away from home in the United States.

The TEIM was created to capture the highly complex nature of the U.S. travel industry at national, regional, state and local levels. The TEIM was designed so that economic impact estimates could be compared across all fifty states and the District of Columbia, thereby allowing states and localities to assess their market share nationally, regionally or within the state.

The domestic component of TEIM is based on national surveys conducted by the U.S. Travel Association and other travel-related data developed by the U.S. Travel Association, various government agencies and well-known travel organizations each year. A summary of the methodology is provided in Appendix A.

The international travel expenditure estimates are based on the Office of Travel and Tourism Industries' (OTTI) Survey of International Air Travelers to the U.S. and data provided to OTTI from Canada and Mexico. Other estimates of the economic impact of international visitors to the U.S. are generated by TEIM by incorporating the estimated international travelers' expenditures with the data series utilized to produce the domestic estimates.

U.S. residents traveling in Massachusetts includes both state residents and out-of-state visitors traveling away from home overnight in paid accommodations, or on day or overnight trips to places 50 miles or more away from home. Travel commuting to and from work; travel by those operating an airplane, bus, truck, train or other forms of common carrier transportation; military travel on active duty; and travel by students away at school are all excluded from this model. In addition, the payroll and employment estimates represent impact generated in the private sector and exclude government payroll and employment.

Since additional data relating to travel and its economic impact in 2011 will become available subsequent to this study, U.S. Travel Association reserves the right to revise these estimates in the future.

EXECUTIVE SUMMARY

Total Impact of Travel

- In 2011, total domestic and international travel output in Massachusetts, including direct, indirect and induced output, amounted to \$26.9 billion, up 8.9 percent from 2010.
- Domestic and international travel supported a total of 202,000 jobs for the travel industry and other industry sectors in Massachusetts during 2011, a 2.2 percent from 2010.
- Employees supported directly and indirectly by travel in Massachusetts earned a total of \$7.0 billion in 2011, up 5.0 percent from 2010.

Direct Impact of Travel

- Domestic and international travelers directly spent \$16.9 billion in Massachusetts during 2011, up 8.9 percent from 2010. Domestic traveler spending increased 8.5 percent, while international traveler spending increased 11.6 percent.
- Payroll income generated by direct traveler spending in Massachusetts totaled \$3.6 billion during 2011, up 4.4 percent from 2010.
- Travel expenditures directly generated 124,700 jobs within Massachusetts in 2011, up 2.4 percent from 2010. Travel-generated jobs in Massachusetts comprised 3.9 percent of the total non-farm employment in the state during 2011.
- On average, every \$135,656 spent in Massachusetts by domestic and international travelers generated one job in 2011.
- Traveler spending in Massachusetts directly generated nearly \$2.5 billion in tax revenue for federal, state and local governments in 2011, up 5.1 percent from 2010.
- Suffolk County, which includes the city of Boston, received \$7.0 billion in domestic travel expenditures, which leads all Massachusetts counties during 2011.

TRAVEL IMPACT ON THE U.S. ECONOMY IN 2011

In 2011, the U.S. economy had a year of slow growth and fears of a double-dip recession. Real GDP grew at an annual rate of 1.8 percent in 2011, compared to 2.4 percent in 2010. The deceleration in GDP growth in 2011 was due to slowdowns in export growth and inventory accumulation along with a decline in government spending, which together more than offset accelerations in consumer spending and business fixed investment. Real disposable personal income increased 1.3 percent, slower than the 1.8 percent growth in 2010. In 2011, the nation's employment situation improved for the first time in four years: total non-farm employment increased 1.1 percent and total private industry employment grew a faster 1.7 percent. As a result, the unemployment rate decreased from 9.6 percent in 2010 to 8.9 percent in 2011.

With respect to inflation, the U.S. Consumer Price Index (CPI) rose 3.2 percent in 2011, whereas inflation in the travel industry, measured by the U.S. Travel Association's Travel Price Index (TPI), increased by 6.5 percent in 2011. Travel inflation outpaced overall consumer prices in 2011 primarily due to the sizable increases in motor fuel (26.5%) and airfare (9.3%) prices. Meanwhile, the core CPI (excluding food and energy prices) rose 1.7 percent in 2011, which was a modest increase from the 1 percent rise in 2010. The energy index increased 15.4 percent in 2011 after a 9.5 percent increase in 2010.

The real GDP increased at an annual rate of 2.0 percent in the first quarter of 2012, roughly half the 4.1 percent pace reached in the last quarter in 2011; in the second quarter, economic growth continued to moderate, with real GDP edging up 1.5 percent. The real GDP is forecasted to grow 2.4 percent in 2012 and a mild growth is expected to continue in next few years.

Positive employment growth remains constant, but sluggish. Through the first seven months of 2012, the economy added 151,000 jobs on average per-month, which is slightly less than the 2011 monthly average of 153,000 jobs created. As a consequence of moderate employment growth, the unemployment rate, though lower than at any time since January 2009, hovered around 8.3 percent through the first seven months of 2012. Through June 2012, year to date CPI increased 2.3 percent compared to the first six months of 2011, and is forecasted to increase by 2.6 percent for 2012 overall compared to 2011. The TPI is forecasted to increase 2.9 percent in 2012.

U.S. Travel Volume in 2011

After growing 3.3 percent in 2010, U.S. domestic travel volume measured in person trips increased 1.7 percent in 2011 to 2.0 billion person-trips in the year. A person-trip is defined as one person on a trip away from home overnight in paid accommodations, or on a day or overnight trip to places 50 miles or more, one-way, away from home. Domestic person-trips are expected to increase 1.9 percent in 2012.

In 2011, the growth of domestic travel volume slowed down for both business travelers and leisure travelers. Domestic business person-trips increased 1.0 percent to 456.1 million person-trips for 2011, while domestic leisure travel grew by 1.9 percent to 1.5 billion person-trips. In

line with the economic recovery, the U.S. Travel Association forecasts that domestic business person-trips will be up 2.2 percent and leisure travel will increase 1.8 percent in 2012.

International inbound travelers to the U.S., including visitors from overseas, Canada, and Mexico, made 62.3 million visits to the U.S. in 2011, up 4.2 percent from 2010. Total international arrivals to the U.S. are expected to increase 5.0 percent to 65.4 million in 2012. Overseas arrivals to the U.S. increased 5.8 percent in 2011. During the year, arrivals from Canada increased 5.3, while Mexican visits decreased 0.4 percent.

Travel Expenditures in 2011

Domestic and international travelers' spending in the U.S. increased 8.8 percent in 2011 to \$812.9 billion, not adjusted for inflation. Business travelers spent \$248.8 billion while leisure travelers spent \$564.1 billion. Measured in chained 2005 dollars, real domestic and international travelers' expenditures increased 3.0 percent in 2011.

Domestic travelers spent \$696.7 billion directly in 2011, up 8.2 percent from 2010, before any inflation adjustment. Domestic direct travel expenditures are forecasted to increase 4.8 percent to \$730.2 billion in 2012. Real spending by domestic travelers was up 2.8 percent in 2011 adjusted in chained 2005 dollars.

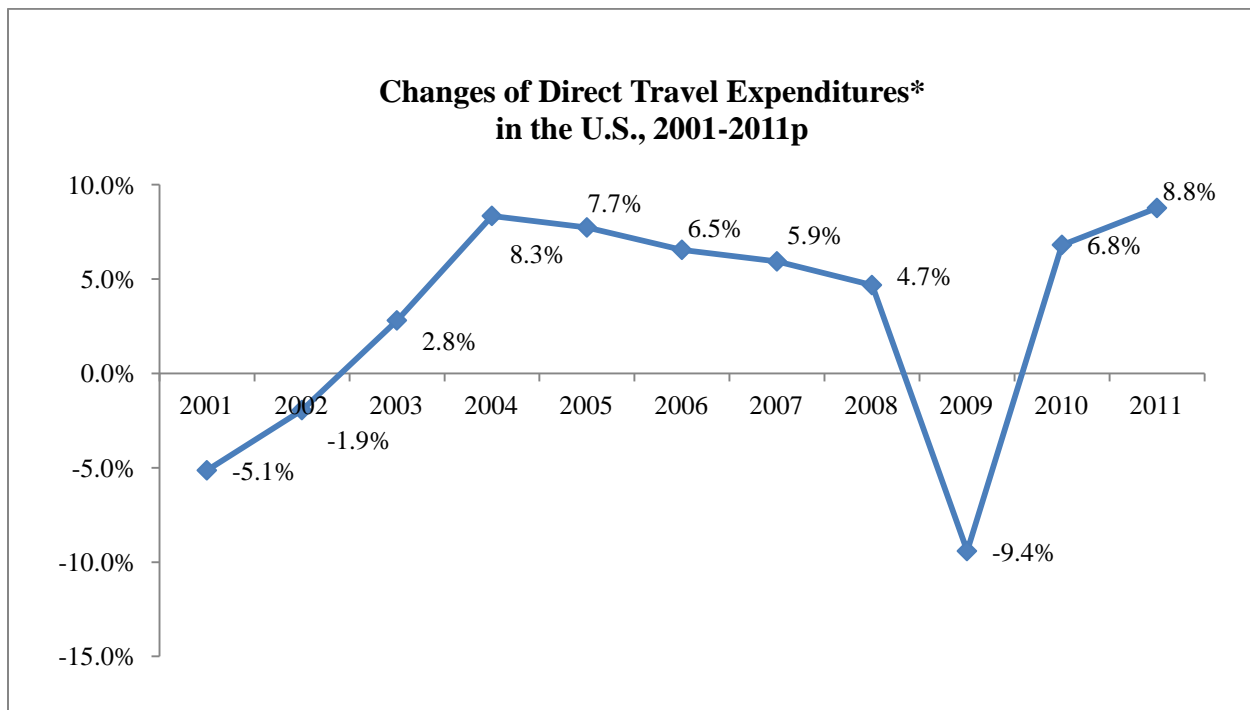
International travelers spent \$116.3 billion in the U.S. during 2011, up 12.3 percent from 2010. In addition, international travelers paid a total of \$36.6 billion to U.S. air carriers on international passenger fares in 2011, up 18.2 percent from 2010. In total, U.S. travel exports including international travelers spending in the U.S. and international passenger fares totaled \$152.7 billion in 2011, accounted for 7.3 percent of U.S. total exports of goods and services. Furthermore, the U.S. travel and tourism industry generated a \$43 billion trade surplus in 2011, \$11.3 billion more than 2010.

Without these travel exports, the 2011 trade deficit on goods and services would be 27.3 percent larger than its current level. International travelers' expenditure (excluding passenger fares) in the U.S. is expected to continue to increase by 7.4 percent to \$124.9 billion in 2012.

Table 1: Travel Expenditures in the U.S., 2010 and 2011

<u>Industry Sector</u>	2010 Travel Spending in The U.S. (\$ Billions)	2011p Travel Spending in The U.S. (\$ Billions)	% 2011p/2010 Travel Spending in The U.S. (Percent Change)
<u>Domestic Travel</u>			
Public Transportation	\$130.4	\$142.7	9.4%
Auto Transportation	123.7	145.8	17.9%
Lodging	108.2	116.1	7.3%
Foodservice	159.0	167.5	5.4%
Entertainment/Recreation	74.0	75.6	2.2%
General Retail	48.7	49.1	0.7%
<u>Domestic Total</u>	\$643.9	\$696.7	8.2%
International Total*	\$103.5	\$116.3	12.3%
Grand Total	\$747.4	\$812.9	8.8%

Source: U.S. Travel Association. P= preliminary. * Excludes international passenger fare receipts.



Source: U.S. Travel Association. P= preliminary. * Excludes international passenger fare receipts.

Travel Employment in 2011

After two years of decline, travel-generated employment in the U.S. increased 1.9 percent to 7.5 million in 2011. This outpaces growth in both total non-farm employment (1.1%) and total private employment (1.7%) in 2011. The travel-generated jobs accounted for 5.7 percent of total nonfarm employment and 6.9 percent of total private employment in 2011. The job growth in the travel industry accounted for seven percent of the total jobs added in 2011. During the year, the number of jobs in the travel industry was double the number of jobs in construction and real estate industries combined.

International traveler spending supported nearly 1.1 million jobs during 2011, up 5.3 percent from 2010. More than one third of added jobs in travel industry were generated by international traveler spending during 2011.

Table 2: Travel-Generated Employment in the U.S., 2010 and 2011

<u>Industry Sector</u>	<u>2010 Travel-Generated Employment (Thousands)</u>	<u>2011p Travel-Generated Employment (Thousands)</u>	<u>% 2011p/2010 Percent Change Employment (%)</u>
<i><u>Domestic Travel</u></i>			
Public Transportation	881.9	884.2	0.3%
Auto Transportation	247.2	249.0	0.7%
Lodging	1,164.6	1,188.4	2.0%
Foodservice	2,534.1	2,579.6	1.8%
Entertainment/Recreation	1,048.8	1,060.6	1.1%
General Retail	316.7	315.3	-0.4%
Travel Planning	156.9	160.7	2.5%
<u>Domestic Total</u>	6,350.2	6,437.9	1.4%
International Total	1,020.7	1,074.5	5.3%
Grand Total	7,370.9	7,512.4	1.9%

Sources: U.S. Travel Association, BLS

Table 3: Overall U.S. Economic Developments, 2009-2011

<u>Sector</u>	<u>2009</u>	<u>2010</u>	<u>2011</u>
Nominal gross domestic product (\$ Billions)	\$13,973.7	\$14,498.9	\$15,075.7
Real gross domestic product (\$ Billions)*	\$12,757.9	\$13,063.0	\$13,299.1
Real disposable personal income (\$Billions)*	\$9,836.7	\$10,016.5	\$10,149.7
Real personal consumption expenditures (\$ Billions)*	\$9,032.6	\$9,196.2	\$9,428.8
Consumer price index**	214.5	218.1	224.9
Travel Price Index**	241.5	250.7	266.9
Non-farm payroll employment (Millions)	130.8	129.9	131.4
Unemployment rate (%)	9.3	9.6	8.9
<i>Percentage change from previous year</i>			
Nominal gross domestic product	-2.2%	3.8%	4.0%
Real gross domestic product	-3.1%	2.4%	1.8%
Real disposable personal income	-2.8%	1.8%	1.3%
Real personal consumption expenditures	-1.9%	1.8%	2.5%
Consumer price index	-0.4%	1.6%	3.2%
Travel Price Index	-6.3%	3.8%	6.5%
Non-farm payroll employment	-4.4%	-0.7%	1.1%

Sources: U.S. Dept. of Commerce, U.S. Dept. of Labor, U.S. Census Bureau, U.S. Travel Association

* Chained 2005 dollars

** 1982-84=100

Table 4: U.S. Travel Trends, 2007-2011

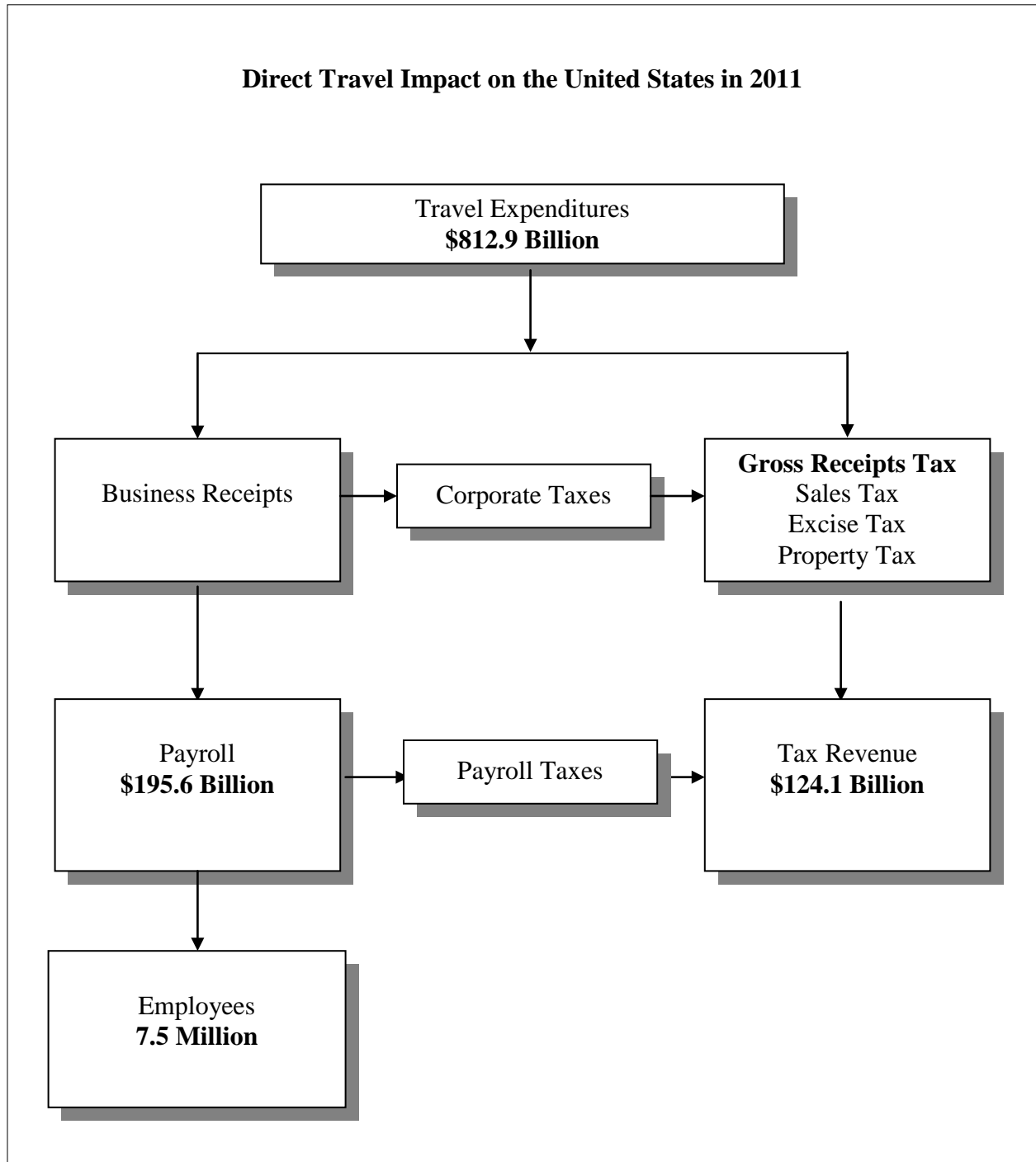
<u>Category</u>	<u>2007</u>	<u>2008</u>	<u>2009</u>	<u>2010</u>	<u>2011</u>
Total travel expenditures (\$ billions)	\$738.0	\$772.5	\$699.8	\$747.4	\$812.9
<i>U.S. travelers' expenditures (\$ billions)</i>	\$640.6	\$662.1	\$605.6	\$643.9	\$696.7
<i>International travelers' expenditures in the U.S.* (\$ billions)</i>	\$97.4	\$110.4	\$94.2	\$103.5	\$116.3
Travel price index**	244.0	257.7	241.5	250.7	266.9
Travel-generated employment*** (thousands)	7,699.9	7,723.1	7,397.2	7,370.9	7,512.4
Percentage change from previous year					
Total travel expenditures	5.9%	4.7%	-9.4%	6.8%	8.8%
<i>U.S. travelers' expenditures</i>	4.9%	3.4%	-8.5%	6.3%	8.2%
<i>International travelers' expenditures in the U.S.</i>	13.0%	13.4%	-14.7%	9.9%	12.3%
Travel price index	4.5%	5.6%	-6.3%	3.8%	6.5%
Travel-generated employment	2.1%	0.3%	-4.2%	-0.4%	1.9%

Sources: U.S. Travel Association, BEA and BLS.

* International traveler spending does not include international passenger fares.

** 1982-84=100.

*** Includes employment generated by both domestic and international traveler expenditures.



Source: U.S. Travel Association, BEA

*Does not include receipts of international passenger fares.

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TRAVEL IMPACT ON MASSACHUSETTS - 2011

TRAVEL IMPACT ON MASSACHUSETTS - 2011

Travel Expenditures

Domestic and international travelers in Massachusetts directly spent \$16.9 billion on transportation, lodging, food, entertainment and recreation, and retail shopping during 2011, representing an increase of 8.9 percent from 2010. Domestic travelers spent \$14.6 billion, while international travelers spent close to \$2.3 billion, up 8.5 percent and 11.6 percent, respectively, from 2010.

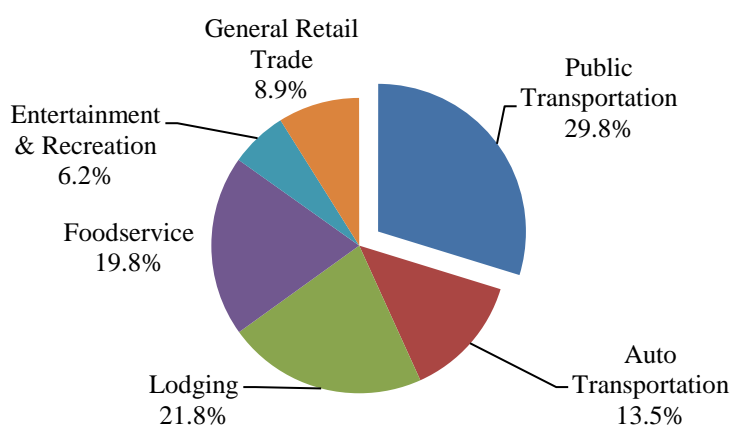
In 2011, domestic and international travelers spent \$5.0 billion on public transportation, up 10.0 percent from 2010.

Domestic and international travelers spent \$3.7 billion on lodging during 2011, an increase of 8.2 percent from 2010. According to Smith Travel Research, hotel room demand increased by 5.2 percent in 2011 while the average daily room rate increased at a slower pace of 3.3 percent.

Spending on foodservice by domestic and international travelers totaled more than \$3.3 billion, up 6.4 percent from 2010.

Domestic and international travel spending on auto transportation increased by 14.8 percent in 2011 to nearly \$2.3 billion, partially reflecting a rise in gasoline prices.

**Travel Spending in Massachusetts in 2011
by Industry Sector**



1. Auto transportation sector includes privately-owned vehicles that are used for trips (e.g., automobiles, trucks, campers or other recreational vehicles), gasoline service stations, and automotive rental.

2. Foodservice sector includes restaurants, grocery stores and other eating and drinking establishments.

3. Public transportation sector comprises air, intercity bus, rail, boat or ship, and taxicab or limousine service.

4. Lodging sector consists of hotels and motels, campgrounds, and ownership or rental of vacation or second homes.

5. General retail trade sector includes gifts, clothes, souvenirs and other incidental retail purchases.

6. Entertainment and recreation sector includes amusement parks and attractions, attendance at nightclubs, movies, legitimate shows, sports events, and other forms of entertainment and recreation while traveling.

Table 5: Direct Travel Expenditures in Massachusetts by Industry Sector, 2010-2011

<i>2011 Expenditures</i>	Domestic (\$ Millions)	International (\$ Millions)	Total (\$ Millions)	% of Total
Public Transportation	\$4,744.7	\$287.7	\$5,032.4	29.8%
Auto Transportation	2,240.7	34.6	2,275.3	13.5%
Lodging	2,920.0	775.7	3,695.6	21.8%
Foodservice	2,906.1	439.0	3,345.0	19.8%
Entertainment & Recreation	869.2	185.4	1,054.7	6.2%
General Retail Trade	939.1	571.7	1,510.8	8.9%
Total	\$14,619.8	\$2,294.0	\$16,913.8	100.0%
2010 Expenditures				
Public Transportation	\$4,322.0	\$253.7	\$4,575.7	29.5%
Auto Transportation	1,952.6	29.5	1,982.0	12.8%
Lodging	2,728.3	687.5	3,415.8	22.0%
Foodservice	2,748.8	395.1	3,143.8	20.2%
Entertainment & Recreation	826.0	171.0	997.0	6.4%
General Retail Trade	897.2	518.2	1,415.4	9.1%
Total	\$13,475.0	\$2,054.9	\$15,529.9	100.0%
Percentage change 2011 over 2010				
	Domestic (%)	International (%)	Total (%)	
Public Transportation	9.8%	13.4%	10.0%	
Auto Transportation	14.8%	17.4%	14.8%	
Lodging	7.0%	12.8%	8.2%	
Foodservice	5.7%	11.1%	6.4%	
Entertainment & Recreation	5.2%	8.4%	5.8%	
General Retail Trade	4.7%	10.3%	6.7%	
Total	8.5%	11.6%	8.9%	

Source: U.S. Travel Association

Travel Expenditures in Massachusetts, 2007-2011

Table 6: Direct Travel Expenditures in Massachusetts by Industry Sector, 2007-2011
(Expenditures in millions of dollars)

	2007	2007	2007	2008	2008	2008	2009	2009	2009	2010	2010	2010	2011	2011	2011
Expenditures	Dom	Int'l	Total	Dom	Int'l	Total	Dom	Int'l	Total	Dom	Int'l	Total	Dom	Int'l	Total
Public Transportation	4,392.9	231.9	4,624.8	4,419.0	265.3	4,684.3	3893.3	237.8	4131.1	4,322.0	253.7	4,575.7	4,744.7	287.7	5,032.4
Auto Transportation	1,908.7	24.6	1,933.3	2,016.5	29.2	2,045.8	1811.9	26.6	1838.4	1,952.6	29.5	1,982.0	2,240.7	34.6	2,275.3
Lodging	2,856.6	641.9	3,498.5	2,851.4	712.6	3,564.0	2467.5	628.0	3095.5	2,728.3	687.5	3,415.8	2,920.0	775.7	3,695.6
Foodservice	2,548.3	327.7	2,876.0	2,605.4	375.9	2,981.3	2601.6	379.3	2980.9	2,748.8	395.1	3,143.8	2,906.1	439.0	3,345.0
Entertainment & Rec.	769.4	148.6	918.0	790.2	165.7	955.9	791.2	164.0	955.2	826.0	171.0	997.0	869.2	185.4	1,054.7
General Retail Trade	870.5	423.4	1,293.9	857.0	488.5	1,345.5	853.7	497.8	1351.5	897.2	518.2	1,415.4	939.1	571.7	1,510.8
Total	13,346.5	1,798.1	15,144.6	13,539.5	2,037.3	15,576.8	12419.2	1933.5	14352.6	13,475.0	2,054.9	15,529.9	14,619.8	2,294.0	16,913.8
% Change*	Dom	Int'l	Total	Dom	Int'l	Total	Dom	Int'l	Total	Dom	Int'l	Total	Dom	Int'l	Total
Public Transportation	5.4%	7.2%	5.5%	0.6%	14.4%	1.3%	-11.9%	-10.4%	-11.8%	11.0%	6.7%	10.8%	9.8%	13.4%	10.0%
Auto Transportation	5.9%	11.2%	6.0%	5.6%	18.9%	5.8%	-10.1%	-9.1%	-10.1%	7.8%	10.7%	7.8%	14.8%	17.4%	14.8%
Lodging	8.0%	12.2%	8.8%	-0.2%	11.0%	1.9%	-13.5%	-11.9%	-13.1%	10.6%	9.5%	10.3%	7.0%	12.8%	8.2%
Foodservice	6.0%	10.4%	6.5%	2.2%	14.7%	3.7%	-0.1%	0.9%	0.0%	5.7%	4.2%	5.5%	5.7%	11.1%	6.4%
Entertainment & Rec.	4.9%	9.5%	5.7%	2.7%	11.5%	4.1%	0.1%	-1.0%	-0.1%	4.4%	4.3%	4.4%	5.2%	8.4%	5.8%
General Retail Trade	3.6%	12.5%	6.3%	-1.5%	15.4%	4.0%	-0.4%	1.9%	0.4%	5.1%	4.1%	4.7%	4.7%	10.3%	6.7%
Total	6.0%	11.1%	6.6%	1.4%	13.3%	2.9%	-8.3%	-5.1%	-7.9%	8.5%	6.3%	8.2%	8.5%	11.6%	8.9%
% of Total	Dom	Int'l	Total	Dom	Int'l	Total	Dom	Int'l	Total	Dom	Int'l	Total	Dom	Int'l	Total
Public Transportation	32.9%	12.9%	30.5%	32.6%	13.0%	30.1%	31.3%	12.3%	28.8%	32.1%	12.3%	29.5%	32.5%	12.5%	29.8%
Auto Transportation	14.3%	1.4%	12.8%	14.9%	1.4%	13.1%	14.6%	1.4%	12.8%	14.5%	1.4%	12.8%	15.3%	1.5%	13.5%
Lodging	21.4%	35.7%	23.1%	21.1%	35.0%	22.9%	19.9%	32.5%	21.6%	20.2%	33.5%	22.0%	20.0%	33.8%	21.8%
Foodservice	19.1%	18.2%	19.0%	19.2%	18.5%	19.1%	20.9%	19.6%	20.8%	20.4%	19.2%	20.2%	19.9%	19.1%	19.8%
Entertainment & Rec.	5.8%	8.3%	6.1%	5.8%	8.1%	6.1%	6.4%	8.5%	6.7%	6.1%	8.3%	6.4%	5.9%	8.1%	6.2%
General Retail Trade	6.5%	23.5%	8.5%	6.3%	24.0%	8.6%	6.9%	25.7%	9.4%	6.7%	25.2%	9.1%	6.4%	24.9%	8.9%
Total	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%

Source: U.S. Travel Association

* Compared with previous year and not adjusted by inflation rate.

TRAVEL IMPACT ON MASSACHUSETTS – 2011

Travel-Generated Payroll

Travel-generated payroll is the wage and salary income paid to employees directly serving travelers within the industry sectors from which travelers purchase goods and services. One dollar of travel spending generates different amounts of payroll income within the various travel industry sectors depending on the labor content and the wage structure of each sector.

Payroll income generated by domestic and international travel in Massachusetts increased 4.4 percent from 2010, totaling \$3.6 billion in 2011.

Among this total, \$3.1 billion in payroll income was directly generated by domestic travel, a 4.0 percent increase from 2010. International travelers' spending in state directly generated \$515.3 million in payroll income for Massachusetts' travel industry employees, up 6.7 percent from 2010.

On average, every dollar spent by domestic and international travelers produced \$0.21 in payroll income for Massachusetts' residents during 2011.

Compared with 2010, travel-generated payroll for the public transportation sector showed the most growth among seven sectors investigated, up 6.2 percent. Payroll for the lodging sector increased 4.7 percent from 2010.

The average payroll income generated by travel in Massachusetts stood at \$29,106 in 2011, an increase of 1.9 percent from 2010. The increase was mostly driven by payroll growth in the lodging, public transportation, and auto foodservice sectors.

**Travel-Generated Payroll in Massachusetts
in 2011 Industry Sector**

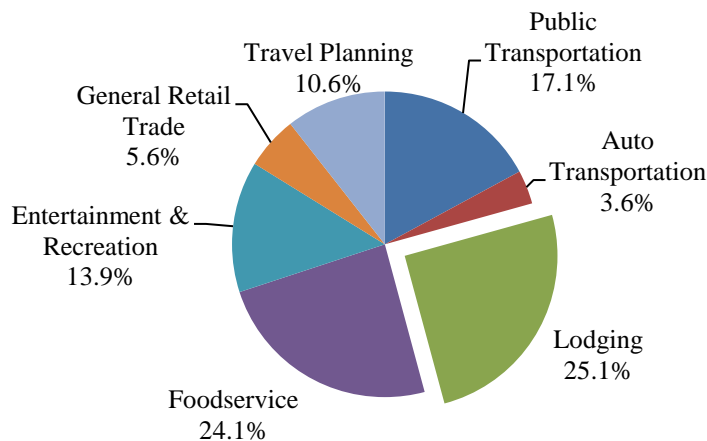


Table 7: Direct Travel-Generated Payroll in Massachusetts by Industry Sector, 2010-2011

2011 Payroll	Domestic (\$ Millions)	International (\$ Millions)	Total (\$ Millions)	% of Total
Public Transportation	\$588.9	\$32.5	\$621.4	17.1%
Auto Transportation	126.8	2.3	129.1	3.6%
Lodging	727.4	184.7	912.0	25.1%
Foodservice	757.5	118.6	876.2	24.1%
Entertainment & Recreation	411.6	91.3	503.0	13.9%
General Retail Trade	117.0	85.8	202.8	5.6%
Travel Planning *	384.5	0.0	384.5	10.6%
Total	\$3,113.7	\$515.3	\$3,629.0	100.0%
<hr/>				
2010 Payroll				
Public Transportation	\$555.3	\$29.7	\$585.0	16.8%
Auto Transportation	122.6	2.1	124.7	3.6%
Lodging	696.0	174.9	870.9	25.1%
Foodservice	733.3	109.3	842.6	24.2%
Entertainment & Recreation	404.2	87.0	491.2	14.1%
General Retail Trade	115.0	80.0	195.0	5.6%
Travel Planning *	366.3	0.0	366.3	10.5%
Total	\$2,992.6	\$483.1	\$3,475.7	100.0%
<hr/>				
Percentage change 2011 over 2010	Domestic (%)	International (%)	Total (%)	
Public Transportation	6.1%	9.6%	6.2%	
Auto Transportation	3.5%	5.9%	3.5%	
Lodging	4.5%	5.6%	4.7%	
Foodservice	3.3%	8.6%	4.0%	
Entertainment & Recreation	1.8%	4.9%	2.4%	
General Retail Trade	1.7%	7.2%	4.0%	
Travel Planning *	5.0%	—	5.0%	
Total	4.0%	6.7%	4.4%	

Source: U.S. Travel Association

*Refers to payroll income that goes to travel agents, tour operators, and other travel service employees who arrange passenger transportation, lodging, tours and other related services.

Travel-Generated Payroll in Massachusetts, 2007-2011

Table 8: Direct Travel Payroll in Massachusetts by Industry Sector, 2007-2011

(Payroll in millions of dollars)

	2007	2007	2007	2008	2008	2008	2009	2009	2009	2010	2010	2010	2011	2011	2011
Payroll	Dom	Int'l	Total	Dom	Int'l	Total	Dom	Int'l	Total	Dom	Int'l	Total	Dom	Int'l	Total
Public Trans.	593.1	28.5	621.6	567.4	31.0	598.5	544.7	30.3	575.0	555.3	29.7	585.0	588.9	32.5	621.4
Auto Trans.	127.7	1.9	129.6	125.9	2.1	128.0	124.2	2.1	126.3	122.6	2.1	124.7	126.8	2.3	129.1
Lodging	744.0	166.7	910.7	751.1	187.2	938.3	676.6	171.7	848.3	696.0	174.9	870.9	727.4	184.7	912.0
Foodservice	734.8	98.0	832.7	744.9	111.4	856.3	724.4	109.5	833.9	733.3	109.3	842.6	757.5	118.6	876.2
Entertainment & Rec.	398.2	80.0	478.2	407.5	88.9	496.3	389.4	84.0	473.4	404.2	87.0	491.2	411.6	91.3	503.0
General Retail Trade	120.5	70.7	191.2	114.8	78.8	193.6	114.4	80.4	194.8	115.0	80.0	195.0	117.0	85.8	202.8
Travel Planning	418.7		418.7	439.1		439.1	355.9		355.9	366.3		366.3	384.5		384.5
Total	3,137.0	445.8	3,582.8	3,150.6	499.5	3,650.1	2,929.5	478.0	3,407.5	2,992.6	483.1	3,475.7	3,113.7	515.3	3,629.0
% Change*	Dom	Int'l	Total	Dom	Int'l	Total	Dom	Int'l	Total	Dom	Int'l	Total	Dom	Int'l	Total
Public Trans.	8.1%	9.9%	8.2%	-4.3%	8.8%	-3.7%	-4.0%	-2.4%	-3.9%	1.9%	-2.0%	1.7%	6.1%	9.6%	6.2%
Auto Trans.	1.4%	6.4%	1.4%	-1.4%	10.9%	-1.2%	-1.4%	-0.3%	-1.4%	-1.3%	2.1%	-1.3%	3.5%	5.9%	3.5%
Lodging	6.1%	10.2%	6.8%	1.0%	12.3%	3.0%	-9.9%	-8.3%	-9.6%	2.9%	1.9%	2.7%	4.5%	5.6%	4.7%
Foodservice	4.7%	9.0%	5.2%	1.4%	13.7%	2.8%	-2.8%	-1.7%	-2.6%	1.2%	-0.2%	1.0%	3.3%	8.6%	4.0%
Entertainment & Rec.	4.7%	9.3%	5.4%	2.3%	11.1%	3.8%	-4.4%	-5.5%	-4.6%	3.8%	3.6%	3.8%	1.8%	4.9%	2.4%
General Retail Trade	2.3%	11.2%	5.4%	-4.8%	11.6%	1.3%	-0.3%	1.9%	0.6%	0.5%	-0.5%	0.1%	1.7%	7.2%	4.0%
Travel Planning	4.7%		4.7%	4.9%		4.9%	-19.0%		-19.0%	2.9%		2.9%	5.0%		5.0%
Total	5.4%	9.9%	5.9%	0.4%	12.0%	1.9%	-7.0%	-4.3%	-6.6%	2.2%	1.1%	2.0%	4.0%	6.7%	4.4%
% of Total	Dom	Int'l	Total	Dom	Int'l	Total	Dom	Int'l	Total	Dom	Int'l	Total	Dom	Int'l	Total
Public Trans.	18.9%	6.4%	17.3%	18.0%	6.2%	16.4%	18.6%	6.3%	16.9%	18.6%	6.1%	16.8%	18.9%	6.3%	17.1%
Auto Trans.	4.1%	0.4%	3.6%	4.0%	0.4%	3.5%	4.2%	0.4%	3.7%	4.1%	0.4%	3.6%	4.1%	0.4%	3.6%
Lodging	23.7%	37.4%	25.4%	23.8%	37.5%	25.7%	23.1%	35.9%	24.9%	23.3%	36.2%	25.1%	23.4%	35.8%	25.1%
Foodservice	23.4%	22.0%	23.2%	23.6%	22.3%	23.5%	24.7%	22.9%	24.5%	24.5%	22.6%	24.2%	24.3%	23.0%	24.1%
Entertainment & Rec.	12.7%	17.9%	13.3%	12.9%	17.8%	13.6%	13.3%	17.6%	13.9%	13.5%	18.0%	14.1%	13.2%	17.7%	13.9%
General Retail Sales	3.8%	15.8%	5.3%	3.6%	15.8%	5.3%	3.9%	16.8%	5.7%	3.8%	16.6%	5.6%	3.8%	16.7%	5.6%
Travel Planning	13.3%		11.7%	13.9%		12.0%	12.1%		10.4%	12.2%		10.5%	12.3%		10.6%
Total	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%

Source: U.S. Travel Association

* Compared with previous year.

TRAVEL IMPACT ON MASSACHUSETTS - 2011

Travel-Generated Employment

The most impressive contribution that travel and tourism makes to the Massachusetts economy is the number of businesses and jobs it supports. These jobs include a large number of executive and managerial positions as well as service-oriented occupations.

Domestic and international traveler spending in Massachusetts directly generated 124,700 jobs, up 2.4 percent from 2010. Employment generated by domestic traveler spending was up 2.0 percent, while employment generated by international traveler spending was up 5.1 percent.

On average, every \$135,656 spent by domestic and international travelers in Massachusetts directly supported one job in 2011.

These travel-generated jobs comprised 3.9 percent of total non-agricultural employment in Massachusetts during 2011. Without these jobs generated by travel, Massachusetts's 2011 unemployment rate of 7.4 percent would have been 3.6 percentage points higher, increasing it to 11.0 percent.

Domestic and international traveler spending on foodservice, including restaurants and other eating and drinking places, provided more jobs than any other travel industry sector, up 2.6 percent from 2010 to 47,400 jobs. The labor intensiveness of these businesses contributes to the high level of travel employment in this sector.

Travel-Generated Employment in Massachusetts in 2011 by Industry Sector

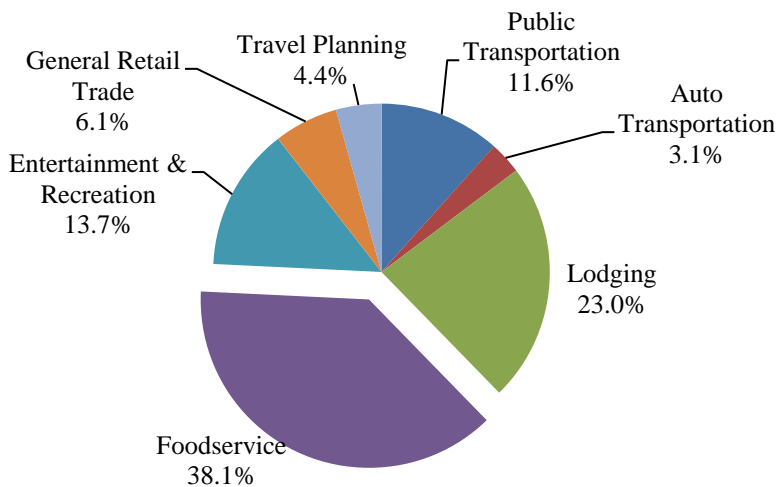


Table 9: Direct Travel-Generated Employment in Massachusetts by Industry Sector, 2010-2011

<i>2011 Employment</i>	Domestic (Thousands)	International (Thousands)	Total (Thousands)	% of Total
Public Transportation	13.7	0.8	14.5	11.6%
Auto Transportation	3.8	0.1	3.9	3.1%
Lodging	23.5	5.2	28.7	23.0%
Foodservice	41.6	5.9	47.4	38.1%
Entertainment & Recreation	14.2	2.9	17.1	13.7%
General Retail Trade	4.6	3.0	7.6	6.1%
Travel Planning *	5.5	0.0	5.5	4.4%
Total	106.8	17.9	124.7	100.0%
2010 Employment				
Public Transportation	13.2	0.7	14.0	11.5%
Auto Transportation	3.7	0.1	3.8	3.1%
Lodging	23.1	5.1	28.2	23.1%
Foodservice	40.8	5.5	46.3	38.0%
Entertainment & Recreation	14.1	2.8	16.9	13.9%
General Retail Trade	4.5	2.9	7.4	6.1%
Travel Planning *	5.3	0.0	5.3	4.3%
Total	104.7	17.0	121.7	100.0%
Percentage change 2011 over 2010				
	Domestic (%)	International (%)	Total (%)	
Public Transportation	3.6%	7.0%	3.8%	
Auto Transportation	1.9%	4.2%	1.9%	
Lodging	1.6%	2.4%	1.7%	
Foodservice	2.0%	7.1%	2.6%	
Entertainment & Recreation	0.8%	3.9%	1.3%	
General Retail Trade	1.3%	6.8%	3.4%	
Travel Planning *	3.7%	—	3.7%	
Total	2.0%	5.1%	2.4%	

Source: U.S. Travel Association

* Refers to jobs created in travel arrangement firms such as travel agencies, wholesale and retail tour companies, and other travel-related service businesses.

Travel-Generated Employment in Massachusetts, 2007-2011

Table 10: Direct Travel Employment in Massachusetts by Industry Sector, 2007-2011
(Employment in thousands)

	2007	2007	2007	2008	2008	2008	2009	2009	2009	2010	2010	2010	2011	2011	2011
Employment	Dom	Int'l	Total	Dom	Int'l	Total	Dom	Int'l	Total	Dom	Int'l	Total	Dom	Int'l	Total
Public Trans.	14.2	0.7	14.9	14.0	0.8	14.8	13.1	0.8	13.8	13.2	0.7	14.0	13.7	0.8	14.5
Auto Trans.	4.1	0.1	4.1	4.0	0.1	4.0	3.8	0.1	3.9	3.7	0.1	3.8	3.8	0.1	3.9
Lodging	25.3	5.0	30.3	25.3	5.5	30.9	23.3	5.2	28.4	23.1	5.1	28.2	23.5	5.2	28.7
Foodservice	42.1	5.0	47.1	41.7	5.6	47.3	40.5	5.5	46.0	40.8	5.5	46.3	41.6	5.9	47.4
Entertainment & Rec.	14.4	2.7	17.0	14.4	2.9	17.3	13.9	2.8	16.6	14.1	2.8	16.9	14.2	2.9	17.1
General Retail Trade	5.0	2.7	7.7	4.7	2.9	7.7	4.6	2.9	7.5	4.5	2.9	7.4	4.6	3.0	7.6
Travel Planning	6.6		6.6	6.8		6.8	5.3		5.3	5.3		5.3	5.5		5.5
Total	111.7	16.1	127.8	110.9	17.8	128.8	104.4	17.2	121.5	104.7	17.0	121.7	106.8	17.9	124.7
% Change*	Dom	Int'l	Total	Dom	Int'l	Total	Dom	Int'l	Total	Dom	Int'l	Total	Dom	Int'l	Total
Public Trans.	2.6%	4.4%	2.7%	-1.1%	12.4%	-0.5%	-7.0%	-5.5%	-7.0%	1.4%	-2.5%	1.2%	3.6%	7.0%	3.8%
Auto Trans.	-2.3%	2.6%	-2.2%	-3.0%	9.1%	-2.8%	-2.6%	-1.5%	-2.6%	-3.5%	-0.8%	-3.5%	1.9%	4.2%	1.9%
Lodging	1.1%	5.1%	1.8%	0.0%	10.9%	1.8%	-8.1%	-6.4%	-7.8%	-0.8%	-1.8%	-1.0%	1.6%	2.4%	1.7%
Foodservice	1.6%	5.9%	2.1%	-0.9%	11.2%	0.4%	-2.8%	-1.8%	-2.7%	0.8%	-0.7%	0.6%	2.0%	7.1%	2.6%
Entertainment & Rec.	0.7%	5.1%	1.4%	0.3%	8.8%	1.6%	-3.9%	-5.0%	-4.1%	1.8%	1.6%	1.7%	0.8%	3.9%	1.3%
General Retail Trade	-1.7%	6.8%	1.0%	-5.8%	10.4%	-0.2%	-3.4%	-1.2%	-2.6%	-0.9%	-1.8%	-1.2%	1.3%	6.8%	3.4%
Travel Planning	-1.1%		-1.1%	2.1%		2.1%	-22.4%		-22.4%	0.0%		0.0%	3.7%		3.7%
Total	1.1%	5.6%	1.6%	-0.7%	10.6%	0.7%	-5.9%	-3.8%	-5.6%	0.4%	-0.9%	0.2%	2.0%	5.1%	2.4%
% of Total	Dom	Int'l	Total	Dom	Int'l	Total	Dom	Int'l	Total	Dom	Int'l	Total	Dom	Int'l	Total
Public Trans.	12.7%	4.4%	11.7%	12.7%	4.5%	11.5%	12.5%	4.4%	11.4%	12.6%	4.3%	11.5%	12.8%	4.4%	11.6%
Auto Trans.	3.6%	0.4%	3.2%	3.6%	0.4%	3.1%	3.7%	0.4%	3.2%	3.5%	0.4%	3.1%	3.5%	0.4%	3.1%
Lodging	22.7%	30.9%	23.7%	22.8%	31.0%	24.0%	22.3%	30.2%	23.4%	22.0%	29.9%	23.1%	22.0%	29.1%	23.0%
Foodservice	37.7%	31.2%	36.8%	37.6%	31.4%	36.7%	38.8%	32.0%	37.8%	39.0%	32.1%	38.0%	38.9%	32.7%	38.1%
Entertainment & Rec.	12.9%	16.5%	13.3%	13.0%	16.2%	13.4%	13.3%	16.0%	13.7%	13.5%	16.5%	13.9%	13.3%	16.3%	13.7%
General Retail Sales	4.5%	16.5%	6.0%	4.3%	16.5%	6.0%	4.4%	16.9%	6.2%	4.3%	16.8%	6.1%	4.3%	17.0%	6.1%
Travel Planning	5.9%		5.2%	6.1%		5.3%	5.0%		4.3%	5.0%		4.3%	5.1%		4.4%
Total	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%

Source: U.S. Travel Association

* Compared with previous year and not adjusted by inflation rate.

TRAVEL IMPACT ON MASSACHUSETTS - 2011

Travel-Generated Tax Revenue

Travel tax receipts are the federal, state and local tax revenues attributable to travel spending in Massachusetts. Travel-generated tax revenue is a significant economic benefit, as governments use these funds to support the travel infrastructure and help support a variety of public programs.

In 2011, domestic and international traveler spending in Massachusetts generated nearly \$2.5 billion in tax revenue for federal, state and local governments, up 5.1 percent from 2010. Domestic traveler spending generated \$2.1 billion and international traveler spending generated \$354.4 million – up 4.7 percent and 7.7 percent, respectively, from 2010.

Of the total \$2.5 billion in tax revenue, the federal government received 57.3 percent or \$1.4 billion, up 5.1 percent from 2010. Each dollar spent by domestic and international travelers in Massachusetts produced 8.4 cents for federal tax coffers.

Domestic and international traveler spending in Massachusetts also generated \$652.2 million in tax revenue for the state treasury through state sales and excise taxes, and taxes on personal and corporate income during 2011, up 4.7 percent from 2010. This \$652.2 million comprised 26.3 percent of all travel-generated tax revenue collected in the state. On average, each travel dollar produced 3.9 cents in state tax receipts.

Local governments in Massachusetts directly benefited from travel as well. Travel taxes collected by local governments increased 5.9 percent to \$406.1 million in 2011 through various kinds of county or city taxes such as local hotel occupancy tax, sales tax and property tax related to travel, etc. This growth includes the increase of local room tax rate in some counties. Each domestic travel dollar produced 2.4 cents for local tax coffers.

**Travel-Generated Tax Revenue in Massachusetts
in 2011 by Level of Government**

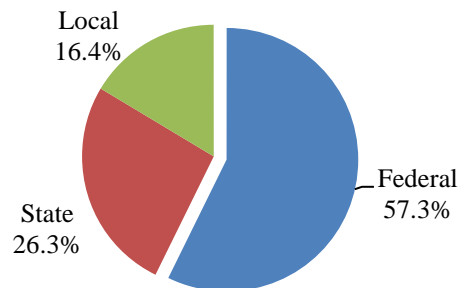


Table 11: Direct Travel-Generated Tax Revenue in Massachusetts by Level of Government, 2010-2011

<i>2011 Tax Revenue</i>	Domestic (\$ Millions)	International (\$ Millions)	Total (\$ Millions)	% of Total
Federal	\$1,202.0	\$216.9	\$1,419.0	57.3%
State	562.2	90.0	652.2	26.3%
Local	358.6	47.5	406.1	16.4%
Total	\$2,122.9	\$354.4	\$2,477.3	100.0%
<hr/>				
<i>2010 Tax Revenue</i>				
Federal	\$1,148.8	\$201.5	\$1,350.3	57.3%
State	538.9	83.8	622.7	26.4%
Local	339.9	43.8	383.6	16.3%
Total	\$2,027.6	\$329.1	\$2,356.6	100.0%
<hr/>				
<i>Percentage change 2011 over 2010</i>	Domestic (%)	International (%)	Total (%)	
Federal	4.6%	7.7%	5.1%	
State	4.3%	7.4%	4.7%	
Local	5.5%	8.6%	5.9%	
Total	4.7%	7.7%	5.1%	

Source: U.S. Travel Association

Travel-Generated Tax Revenue in Massachusetts, 2007-2011

Table 12: Direct Travel Tax Revenue in Massachusetts by Level of Government, 2007-2011
(Tax Revenues in millions of dollars)

	2007	2007	2007	2008	2008	2008	2009	2009	2009	2010	2010	2010	2011	2011	2011
Tax Revenue	Dom	Int'l	Total	Dom	Int'l	Total	Dom	Int'l	Total	Dom	Int'l	Total	Dom	Int'l	Total
Federal	1,199.4	185.8	1,385.2	1,198.7	207.4	1,406.2	1,094.6	196.0	1,290.6	1,148.8	201.5	1,350.3	1,202.0	216.9	1,419.0
State	516.9	71.0	588.0	518.5	79.6	598.1	495.2	78.6	573.8	538.9	83.8	622.7	562.2	90.0	652.2
Local	319.1	36.3	355.4	323.5	41.1	364.6	301.8	39.7	341.5	339.9	43.8	383.6	358.6	47.5	406.1
Total	2,035.4	293.2	2,328.5	2,040.7	328.1	2,368.8	1,891.7	314.3	2,206.0	2,027.6	329.1	2,356.6	2,122.9	354.4	2,477.3
% Change*	Dom	Int'l	Total	Dom	Int'l	Total	Dom	Int'l	Total	Dom	Int'l	Total	Dom	Int'l	Total
Federal	5.0%	10.0%	5.7%	-0.1%	11.6%	1.5%	-8.7%	-5.5%	-8.2%	5.0%	2.8%	4.6%	4.6%	7.7%	5.1%
State	5.5%	10.6%	6.1%	0.3%	12.0%	1.7%	-4.5%	-1.2%	-4.1%	8.8%	6.6%	8.5%	4.3%	7.4%	4.7%
Local	6.2%	11.3%	6.7%	1.4%	13.2%	2.6%	-6.7%	-3.5%	-6.3%	12.6%	10.3%	12.3%	5.5%	8.6%	5.9%
Total	5.3%	10.3%	5.9%	0.3%	11.9%	1.7%	-7.3%	-4.2%	-6.9%	7.2%	4.7%	6.8%	4.7%	7.7%	5.1%
% of Total	Dom	Int'l	Total	Dom	Int'l	Total	Dom	Int'l	Total	Dom	Int'l	Total	Dom	Int'l	Total
Federal	58.9%	63.4%	59.5%	58.7%	63.2%	59.4%	57.9%	62.4%	58.5%	56.7%	61.2%	57.3%	56.6%	61.2%	57.3%
State	25.4%	24.2%	25.3%	25.4%	24.3%	25.2%	26.2%	25.0%	26.0%	26.6%	25.5%	26.4%	26.5%	25.4%	26.3%
Local	15.7%	12.4%	15.3%	15.9%	12.5%	15.4%	16.0%	12.6%	15.5%	16.8%	13.3%	16.3%	16.9%	13.4%	16.4%
Total	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%

Source: U.S. Travel Association

* Compared with previous year and not adjusted by inflation rate.

MULTIPLIER IMPACT OF TRAVEL SPENDING IN MASSACHUSETTS

Travelers in Massachusetts produce "secondary" impacts over and above that of their original expenditures previously detailed. These secondary outputs (sales), employment and earnings (wage and salary income) arise from "indirect" and "induced" impacts.

Indirect impacts occur as travel industry business operators, such as restaurateurs, purchase goods, such as food and beverages, and services, such as electricity and building maintenance, from local suppliers. These purchases generate additional output or sales indirectly.

Induced impact occurs as a result of the employees of businesses, and their suppliers, spending part of their earnings in the area. This spending generates sales in addition to the indirect impact.

The sum of the indirect and induced effects comprises the total secondary impact in the state. The ratio of the sum of primary output generated plus secondary output to initial expenditures alone is commonly termed the sales or output "multiplier".

During the secondary impact process, wage and salary income (earnings) is generated in addition to that produced by the initial travel expenditures as the suppliers employ labor to produce the additional output. The "earnings multiplier" is the ratio of the total primary and secondary earnings generated by the initial travel spending to that spending. Just as additional earnings are created, employment is also generated during the secondary impact process. The "employment multiplier" represents the number of jobs provided, directly and indirectly, for each one million dollars of output or expenditures generated.

Table 13 summarizes the direct, indirect and induced, and total impacts of travel spending on the Massachusetts economy from 2007 to 2011. Table 14 shows the comparison of expenditure, earnings, and employment multipliers for the same period.

In 2011, the \$16.9 billion spent directly by domestic and international travelers in Massachusetts generated \$26.9 billion in total output, up 8.9 percent from 2010. The ratio of total output to the initial spending is 1.59, the output multiplier. This indicates that the average travel dollar generated an additional 59 cents in secondary sales.

In addition to \$3.6 billion in payroll income generated by direct travel spending, \$3.3 billion in earnings was produced by secondary impact in 2011. The ratio of total earnings generated to the initial spending is 0.41, the earnings multiplier.

In addition, travel in Massachusetts directly and indirectly supported a total of 202,000 jobs in 2011. The ratio of total employment generated to initial spending is 11.9, the employment multiplier. This means that every one million dollars spent by domestic and international travelers in Massachusetts supported nearly 12 jobs in the state during 2011.

Multiplier Impact of Travel Spending in Massachusetts

Table 13: Multiplier Impact of Traveler Spending in Massachusetts, 2007-2011

Year	Impact Measure	Direct Impact	Indirect & Induced Impact	Total Impact
2011	Expenditures (millions)	\$16,913.8	\$10,022.3	\$26,936.2
	Earnings (millions)	\$3,629.0	\$3,334.4	\$6,963.4
	Employment (thousands)	124.7	77.3	202.0
2010	Expenditures (millions)	\$15,529.9	\$9,215.2	\$24,745.1
	Earnings (millions)	\$3,475.7	\$3,155.0	\$6,630.8
	Employment (thousands)	121.7	76.0	197.7
2009	Expenditures (millions)	\$14,352.6	\$8,572.8	\$22,925.4
	Earnings (millions)	\$3,407.5	\$3,074.6	\$6,482.1
	Employment (thousands)	121.5	77.6	199.1
2008	Expenditures (millions)	\$15,576.8	\$9,106.5	\$24,683.3
	Earnings (millions)	\$3,650.1	\$3,314.3	\$6,964.5
	Employment (thousands)	128.8	83.9	212.7
2007	Expenditures (millions)	\$15,144.6	\$8,959.4	\$24,103.9
	Earnings (millions)	\$3,582.8	\$3,264.5	\$6,847.3
	Employment (thousands)	127.8	83.5	211.4

Sources: U.S. Department of Commerce, Bureau of Economic Analysis, RIMS II; U.S. Travel Association

Table 14: Multipliers of Travel in Massachusetts, 2007-2011

<i>Multipliers</i>	2007	2008	2009	2010	2011
Output Multiplier	1.59	1.58	1.60	1.59	1.59
Earning Multiplier	0.45	0.45	0.45	0.43	0.41
Employment Multiplier	14.0	13.7	13.9	12.7	11.9

Sources: U.S. Department of Commerce, Bureau of Economic Analysis, RIMS II; U.S. Travel Association

DOMESTIC TRAVEL IMPACT ON MASSACHUSETTS COUNTIES - 2011

During 2011, domestic travelers spent \$14.6 billion while traveling in Massachusetts, up 8.5 percent from 2010. These expenditures directly generated \$3.1 billion in payroll income and 106,800 jobs for Massachusetts' residents. Tax revenue generated by this spending amounted to \$562.2 million for the state government and \$358.6 million for local governments.

Travel expenditures occurred throughout all fourteen counties in Massachusetts. The top five counties in Massachusetts received \$11.7 billion in direct domestic traveler expenditures and accounted for 79.8 percent of the state total. Additionally, travel directly generated \$2.5 billion in payroll income (80.5 percent) in the top five counties, as well as 84,900 jobs (79.5 percent) in 2011. Domestic traveler expenditures in the top five counties also generated \$416.7 million in tax revenue for the state treasury and \$274.7 million tax revenue for local governments in 2011. The top five counties in Massachusetts contributed 75.1 percent of the total tax revenue for the state treasury and local governments.

Domestic Travel Impact on Top 5 Counties

Suffolk County, which includes the city of Boston, led all counties in direct domestic travel expenditures, payroll income and jobs directly generated by travel in 2011. Direct domestic travel expenditures in Suffolk County totaled \$7.0 billion, accounting for 47.7 percent of the state total, up 8.9 percent from 2010. These expenditures generated \$1.3 billion in payroll income and 41,500 jobs for the county residents, up 5.1 percent and 3.0 percent, respectively, from 2010.

Middlesex County ranked second with nearly \$2.2 billion in domestic travel spending in 2011, up 7.8 percent from 2010. These expenditures represented a 14.8 percent share of the state total. Payroll income and jobs directly attributable to domestic travel spending totaled \$552.0 million and 19,500 jobs.

Norfolk County received \$922.5 million from domestic travelers, 6.3 percent of the state total and up 10.1 percent from 2010. These travel expenditures benefited the county with \$268.3 million in payroll income and 9,300 jobs.

In fourth place, Barnstable County posted \$851.8 million in domestic expenditures, 5.8 percent of the state total. The expenditures generated \$217.6 million in payroll as well as 8,400 jobs within the county.

Essex County ranked fifth with \$752.7 million in domestic travel spending in 2011, a 9.0 percent increase from 2010. Domestic traveler spending in Essex County generated \$168.0 million payroll income and 6,200 jobs during 2011.

Table 15: Domestic Travel Impact in Massachusetts - Top 5 Counties, 2010-2011**2011 Impact**

<u>County</u>	<u>Expenditures (\$ Millions)</u>	<u>Payroll (\$ Millions)</u>	<u>Employment (Thousands)</u>	<u>State Tax Receipts (\$ Millions)</u>	<u>Local Tax Receipts (\$ Millions)</u>
Suffolk	\$6,979.1	\$1,300.9	41.5	\$178.7	\$127.0
Middlesex	2,161.2	552.0	19.5	115.7	57.1
Norfolk	922.5	268.3	9.3	47.6	19.8
Barnstable	851.8	217.6	8.4	35.9	51.5
<u>Essex</u>	<u>752.7</u>	<u>168.0</u>	<u>6.2</u>	<u>38.8</u>	<u>19.3</u>
Five County Total	\$11,667.2	\$2,506.8	84.9	\$416.7	\$274.7
State Totals	\$14,619.8	\$3,113.7	106.8	\$562.2	\$358.6
Share of Top 5 Counties	79.8%	80.5%	79.5%	74.1%	76.6%

2010 Impact

Suffolk	\$6,408.0	\$1,238.0	40.3	\$170.7	\$120.4
Middlesex	2,004.0	530.3	19.2	111.1	54.0
Norfolk	838.1	257.6	9.0	45.4	18.6
Barnstable	812.7	213.6	8.4	34.7	49.2
<u>Essex</u>	<u>690.8</u>	<u>162.4</u>	<u>6.1</u>	<u>37.3</u>	<u>18.3</u>
Five County Total	\$10,753.6	\$2,401.9	83.0	\$399.2	\$260.6
State Totals	\$13,475.0	\$2,992.6	104.7	\$538.9	\$339.9
Share of Top 5 Counties	79.8%	80.3%	79.3%	74.1%	76.7%

**Percent Change
2011 over 2010**

Suffolk	8.9%	5.1%	3.0%	4.7%	5.5%
Middlesex	7.8%	4.1%	1.2%	4.2%	5.6%
Norfolk	10.1%	4.2%	3.2%	4.9%	6.6%
Barnstable	4.8%	1.9%	0.0%	3.7%	4.6%
<u>Essex</u>	<u>9.0%</u>	<u>3.5%</u>	<u>1.8%</u>	<u>3.8%</u>	<u>5.5%</u>
Five County Total	8.5%	4.4%	2.2%	4.4%	5.4%
State Total	8.5%	4.0%	2.0%	4.3%	5.5%

Source: U.S. Travel Association

COUNTY TABLES

The following tables list the results of the County Economic Impact Component of U.S. Travel Association's Travel Economic Impact Model for Massachusetts in 2010 and 2011 estimates by county. The estimates presented are for direct domestic travel expenditures and related economic impact. Detailed international impact data is not available at the county level.

Table A	Counties listed alphabetically, with 2011 travel expenditures, travel-generated payroll and employment, and state tax revenue and the local tax revenue for each
Table B	Ranks the counties in order of 2011 travel expenditures from highest to lowest
Table C	Percent distribution for each impact measure in 2011
Table D	Percent change in 2011 over 2010 estimates for each of the measures of economic impact.
Table E	Counties listed alphabetically, with 2010 travel expenditures, travel-generated payroll and employment, and state tax revenue and local tax revenue shown for each
Table F	Annual domestic travel expenditures and percentage change over previous year by county from 2007 to 2011
Table G	Domestic travel-generated payroll and percentage change over previous year by county from 2007 to 2011
Table H	Domestic travel-generated employment and percentage change over previous year by county from 2007 to 2011
Table I	Domestic travel-generated tax revenue and percentage change over previous year by county for state government from 2007 to 2011
Table J	Domestic travel-generated tax revenue and percentage change over previous year by county for local government from 2007 to 2011

Table A: Alphabetical by County, 2011

2011 Domestic Travel Impact on Massachusetts					
Table A: Alphabetical by County, Preliminary 2011					
<u>County</u>	<u>Expenditures (\$ Millions)</u>	<u>Payroll (\$ Millions)</u>	<u>Employment (Thousands)</u>	<u>State Tax Receipts (\$ Millions)</u>	<u>Local Tax Receipts (\$ Millions)</u>
Barnstable	\$851.80	\$217.60	8.43	\$35.93	\$51.48
Berkshire	345.80	86.53	3.46	17.13	9.76
Bristol	421.19	83.71	2.95	21.61	8.07
Dukes	122.31	29.82	1.18	4.59	6.97
Essex	752.67	168.05	6.21	38.76	19.30
Franklin	55.99	9.77	0.36	2.98	1.76
Hampden	483.04	101.64	3.21	25.95	9.49
Hampshire	111.06	23.31	0.83	5.82	3.00
Middlesex	2,161.21	551.98	19.48	115.71	57.07
Nantucket	147.73	30.31	0.99	4.29	5.21
Norfolk	922.45	268.31	9.31	47.63	19.83
Plymouth	514.19	97.83	3.59	24.36	23.19
Suffolk	6,979.10	1,300.86	41.48	178.70	127.04
Worcester	751.26	143.98	5.33	38.75	16.45
Statewide	\$14,619.81	\$3,113.70	106.81	\$562.21	\$358.63

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Table B: Ranking of Counties by Expenditure Levels, 2011

2011 Domestic Travel Impact on Massachusetts					
Table B: Ranking of Counties by Expenditure Levels, Preliminary 2011					
<u>County</u>	<u>Expenditures (\$ Millions)</u>	<u>Payroll (\$ Millions)</u>	<u>Employment (Thousands)</u>	<u>State Tax Receipts (\$ Millions)</u>	<u>Local Tax Receipts (\$ Millions)</u>
Suffolk	\$6,979.10	\$1,300.86	41.48	\$178.70	\$127.04
Middlesex	2,161.21	551.98	19.48	115.71	57.07
Norfolk	922.45	268.31	9.31	47.63	19.83
Barnstable	851.80	217.60	8.43	35.93	51.48
Essex	752.67	168.05	6.21	38.76	19.30
Worcester	751.26	143.98	5.33	38.75	16.45
Plymouth	514.19	97.83	3.59	24.36	23.19
Hampden	483.04	101.64	3.21	25.95	9.49
Bristol	421.19	83.71	2.95	21.61	8.07
Berkshire	345.80	86.53	3.46	17.13	9.76
Nantucket	147.73	30.31	0.99	4.29	5.21
Dukes	122.31	29.82	1.18	4.59	6.97
Hampshire	111.06	23.31	0.83	5.82	3.00
Franklin	55.99	9.77	0.36	2.98	1.76
Statewide	\$14,619.81	\$3,113.70	106.81	\$562.21	\$358.63

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Table C: Percent Distribution by County, 2011

2011 Domestic Travel Impact on Massachusetts					
Table C: Percent Distribution by County, Preliminary 2011					
<u>County</u>	<u>Expenditures</u>	<u>Payroll</u>	<u>Employment</u>	<u>State Tax</u>	<u>Local Tax</u>
Barnstable	5.83%	6.99%	7.89%	6.39%	14.36%
Berkshire	2.37%	2.78%	3.24%	3.05%	2.72%
Bristol	2.88%	2.69%	2.76%	3.84%	2.25%
Dukes	0.84%	0.96%	1.11%	0.82%	1.94%
Essex	5.15%	5.40%	5.81%	6.89%	5.38%
Franklin	0.38%	0.31%	0.34%	0.53%	0.49%
Hampden	3.30%	3.26%	3.00%	4.62%	2.65%
Hampshire	0.76%	0.75%	0.78%	1.03%	0.84%
Middlesex	14.78%	17.73%	18.24%	20.58%	15.91%
Nantucket	1.01%	0.97%	0.93%	0.76%	1.45%
Norfolk	6.31%	8.62%	8.72%	8.47%	5.53%
Plymouth	3.52%	3.14%	3.37%	4.33%	6.47%
Suffolk	47.74%	41.78%	38.83%	31.79%	35.42%
Worcester	5.14%	4.62%	4.99%	6.89%	4.59%
Statewide	100.00%	100.00%	100.00%	100.00%	100.00%

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Table D: Percent Change over 2010

2011 Domestic Travel Impact on Massachusetts					
Table D: Percent Change over 2010					
<u>County</u>	<u>Expenditures</u>	<u>Payroll</u>	<u>Employment</u>	<u>State Tax</u>	<u>Local Tax</u>
Barnstable	4.82%	1.86%	0.05%	3.69%	4.57%
Berkshire	5.67%	1.86%	0.27%	3.43%	6.44%
Bristol	9.58%	1.79%	0.18%	4.03%	6.18%
Dukes	8.92%	4.81%	2.30%	5.51%	4.80%
Essex	8.95%	3.45%	1.80%	3.79%	5.50%
Franklin	10.38%	0.77%	0.10%	2.60%	4.65%
Hampden	9.07%	3.76%	2.23%	4.87%	7.05%
Hampshire	8.44%	2.36%	0.44%	3.72%	5.83%
Middlesex	7.85%	4.09%	1.20%	4.15%	5.58%
Nantucket	5.18%	2.42%	0.59%	4.05%	5.68%
Norfolk	10.06%	4.16%	3.22%	4.94%	6.61%
Plymouth	8.25%	1.95%	0.46%	3.73%	5.01%
Suffolk	8.91%	5.08%	3.03%	4.70%	5.53%
Worcester	9.51%	3.52%	1.63%	4.27%	6.14%
Statewide	8.50%	4.05%	1.98%	4.33%	5.52%

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Table E: Alphabetical by County, 2010

2011 Domestic Travel Impact on Massachusetts					
Table E: Alphabetical by County, 2010					
<u>County</u>	<u>Expenditures (\$ Millions)</u>	<u>Payroll (\$ Millions)</u>	<u>Employment (Thousands)</u>	<u>State Tax Receipts (\$ Millions)</u>	<u>Local Tax Receipts (\$ Millions)</u>
Barnstable	\$812.66	\$213.62	8.42	\$34.65	\$49.23
Berkshire	327.25	84.95	3.45	16.56	9.17
Bristol	384.36	82.24	2.94	20.78	7.60
Dukes	112.29	28.45	1.16	4.35	6.65
Essex	690.84	162.44	6.10	37.34	18.29
Franklin	50.73	9.69	0.36	2.91	1.69
Hampden	442.86	97.96	3.14	24.74	8.87
Hampshire	102.42	22.77	0.83	5.61	2.83
Middlesex	2,003.99	530.29	19.25	111.09	54.05
Nantucket	140.46	29.59	0.98	4.13	4.93
Norfolk	838.10	257.59	9.02	45.39	18.60
Plymouth	474.98	95.96	3.58	23.48	22.09
Suffolk	6,408.03	1,237.97	40.26	170.69	120.38
Worcester	686.02	139.08	5.24	37.16	15.50
Statewide	\$13,474.99	\$2,992.62	104.73	\$538.88	\$339.88

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Table F: Domestic Travel Expenditures by County, 2007-2011

Table F: Domestic Travel Expenditures by County, 2007-2011					
<i>Expenditures (in \$ millions)</i>					
County	2007	2008	2009	2010	2011
Barnstable	\$818.1	\$847.4	\$785.2	\$812.7	\$851.8
Berkshire	335.8	337.2	308.96	327.3	345.8
Bristol	373.4	384.8	361.50	384.4	421.2
Dukes	112.9	113.2	104.81	112.3	122.3
Essex	660.2	675.7	634.88	690.8	752.7
Franklin	48.3	51.5	47.26	50.7	56.0
Hampden	426.6	436.6	419.55	442.9	483.0
Hampshire	102.4	102.8	96.16	102.4	111.1
Middlesex	1,976.7	2,013.3	1856.80	2,004.0	2,161.2
Nantucket	164.8	162.4	136.85	140.5	147.7
Norfolk	820.3	828.6	791.57	838.1	922.5
Plymouth	477.8	477.4	446.49	475.0	514.2
Suffolk	6,357.2	6,419.8	5781.23	6,408.0	6,979.1
Worcester	671.9	688.9	647.93	686.0	751.3
State Totals	\$13,346.5	\$13,539.5	\$12,419.2	\$13,475.0	\$14,619.8
<i>Percentage Change Over Previous Year</i>					
County	2007/2006	2008/2007	2009/2008	2010/2009	2011/2010
Barnstable	3.0%	3.6%	-7.3%	3.5%	4.8%
Berkshire	5.3%	0.4%	-8.4%	5.9%	5.7%
Bristol	3.1%	3.1%	-6.1%	6.3%	9.6%
Dukes	3.3%	0.3%	-7.4%	7.1%	8.9%
Essex	3.9%	2.4%	-6.0%	8.8%	9.0%
Franklin	4.2%	6.5%	-8.2%	7.3%	10.4%
Hampden	4.1%	2.3%	-3.9%	5.6%	9.1%
Hampshire	6.7%	0.3%	-6.4%	6.5%	8.4%
Middlesex	6.6%	1.8%	-7.8%	7.9%	7.8%
Nantucket	4.1%	-1.5%	-15.7%	2.6%	5.2%
Norfolk	6.6%	1.0%	-4.5%	5.9%	10.1%
Plymouth	7.5%	-0.1%	-6.5%	6.4%	8.3%
Suffolk	6.7%	1.0%	-9.9%	10.8%	8.9%
Worcester	5.3%	2.5%	-6.0%	5.9%	9.5%
State Totals	6.0%	1.4%	-8.3%	8.5%	8.5%

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Table G: Domestic Travel-Generated Payroll by County, 2007-2011

Table G: Domestic Travel-Generated Payroll by County, 2007-2011					
<i>Payroll (in \$ millions)</i>					
County	2007	2008	2009	2010	2011
Barnstable	\$218.1	\$227.0	\$212.5	\$213.6	\$217.6
Berkshire	89.7	91.7	84.9	84.9	86.5
Bristol	81.8	83.7	79.4	82.2	83.7
Dukes	28.0	28.2	27.8	28.4	29.8
Essex	161.8	165.4	157.0	162.4	168.0
Franklin	9.0	9.7	9.5	9.7	9.8
Hampden	95.1	95.7	92.9	98.0	101.6
Hampshire	23.9	23.8	22.5	22.8	23.3
Middlesex	542.7	558.6	520.5	530.3	552.0
Nantucket	33.8	32.3	29.5	29.6	30.3
Norfolk	264.0	265.9	256.7	257.6	268.3
Plymouth	101.8	101.1	95.6	96.0	97.8
Suffolk	1,349.5	1,326.6	1,207.0	1,238.0	1,300.9
Worcester	137.8	140.8	133.8	139.1	144.0
State Totals	\$3,137.0	\$3,150.6	\$2,929.5	\$2,992.6	\$3,113.7
<i>Percentage Change Over Previous Year</i>					
County	2007/2006	2008/2007	2009/2008	2010/2009	2011/2010
Barnstable	4.6%	4.1%	-6.4%	0.5%	1.9%
Berkshire	4.4%	2.2%	-7.4%	0.1%	1.9%
Bristol	4.6%	2.4%	-5.1%	3.5%	1.8%
Dukes	4.5%	0.9%	-1.6%	2.4%	4.8%
Essex	2.7%	2.2%	-5.1%	3.5%	3.5%
Franklin	4.1%	7.4%	-1.4%	1.7%	0.8%
Hampden	4.4%	0.6%	-2.9%	5.4%	3.8%
Hampshire	7.4%	-0.4%	-5.5%	1.3%	2.4%
Middlesex	5.3%	2.9%	-6.8%	1.9%	4.1%
Nantucket	7.3%	-4.4%	-8.7%	0.2%	2.4%
Norfolk	4.1%	0.8%	-3.5%	0.4%	4.2%
Plymouth	5.4%	-0.7%	-5.5%	0.4%	2.0%
Suffolk	6.5%	-1.7%	-9.0%	2.6%	5.1%
Worcester	3.4%	2.2%	-5.0%	3.9%	3.5%
State Totals	5.4%	0.4%	-7.0%	2.2%	4.0%

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Table H: Domestic Travel-Generated Employment by County, 2007-2011

Table H: Domestic Travel-Generated Employment by County, 2007-2011*Employment (in thousands)*

County	2007	2008	2009	2010	2011
Barnstable	8.9	9.0	8.5	8.4	8.4
Berkshire	3.7	3.7	3.5	3.5	3.5
Bristol	3.1	3.0	2.9	2.9	2.9
Dukes	1.1	1.1	1.1	1.2	1.2
Essex	6.3	6.3	6.0	6.1	6.2
Franklin	0.4	0.4	0.4	0.4	0.4
Hampden	3.3	3.2	3.2	3.1	3.2
Hampshire	0.9	0.9	0.8	0.8	0.8
Middlesex	20.4	20.4	19.2	19.2	19.5
Nantucket	1.1	1.1	1.0	1.0	1.0
Norfolk	9.4	9.3	9.1	9.0	9.3
Plymouth	3.8	3.8	3.6	3.6	3.6
Suffolk	43.7	43.3	39.8	40.3	41.5
Worcester	5.5	5.4	5.2	5.2	5.3
State Totals	111.7	110.9	104.4	104.7	106.8

Percentage Change Over Previous Year

County	2007/2006	2008/2007	2009/2008	2010/2009	2011/2010
Barnstable	0.5%	0.9%	-5.4%	-1.3%	0.0%
Berkshire	0.1%	-0.1%	-6.4%	-1.2%	0.3%
Bristol	0.2%	-0.7%	-4.1%	1.0%	0.2%
Dukes	-0.3%	-0.7%	0.2%	1.8%	2.3%
Essex	-0.8%	-0.3%	-4.0%	1.6%	1.8%
Franklin	0.5%	1.9%	-6.2%	1.5%	0.1%
Hampden	0.3%	-1.8%	-1.9%	-0.9%	2.2%
Hampshire	3.0%	-3.2%	-4.4%	-0.1%	0.4%
Middlesex	1.3%	-0.3%	-5.8%	0.2%	1.2%
Nantucket	1.2%	-4.5%	-7.0%	-0.6%	0.6%
Norfolk	0.1%	-1.5%	-2.4%	-0.4%	3.2%
Plymouth	1.2%	-1.1%	-4.5%	-0.9%	0.5%
Suffolk	2.0%	-0.9%	-8.0%	1.1%	3.0%
Worcester	-0.6%	-1.0%	-4.0%	0.4%	1.6%
State Totals	1.1%	-0.7%	-5.9%	0.4%	2.0%

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Table I: Domestic Travel-Generated Tax Revenue for MA State Government by County, 2007-2011

Table I: Domestic Travel-Generated Tax Revenue for Massachusetts State Government by County, 2007-2011					
<i>Tax Revenue for State Government (in \$ millions)</i>					
County	2007	2008	2009	2010	2011
Barnstable	\$33.9	\$34.6	\$33.2	\$34.7	\$35.9
Berkshire	16.5	16.4	15.5	16.6	17.1
Bristol	19.6	19.9	19.4	20.8	21.6
Dukes	4.2	4.2	4.0	4.3	4.6
Essex	34.6	35.0	34.0	37.3	38.8
Franklin	2.7	2.8	2.7	2.9	3.0
Hampden	23.1	23.4	23.2	24.7	25.9
Hampshire	5.4	5.4	5.2	5.6	5.8
Middlesex	106.4	107.0	102.1	111.1	115.7
Nantucket	4.7	4.6	4.0	4.1	4.3
Norfolk	43.1	43.0	42.5	45.4	47.6
Plymouth	22.9	22.6	21.9	23.5	24.4
Suffolk	164.4	163.9	152.7	170.7	178.7
Worcester	35.3	35.8	34.8	37.2	38.7
State Totals	\$516.9	\$518.5	\$495.2	\$538.9	\$562.2
<i>Percentage Change Over Previous Year</i>					
County	2007/2006	2008/2007	2009/2008	2010/2009	2011/2010
Barnstable	2.7%	2.3%	-4.1%	4.4%	3.7%
Berkshire	5.0%	-0.9%	-5.2%	6.8%	3.4%
Bristol	2.8%	1.7%	-2.8%	7.2%	4.0%
Dukes	3.0%	-1.0%	-4.2%	8.1%	5.5%
Essex	3.6%	1.1%	-2.8%	9.7%	3.8%
Franklin	3.9%	5.1%	-5.0%	8.3%	2.6%
Hampden	3.8%	1.0%	-0.6%	6.5%	4.9%
Hampshire	6.4%	-1.0%	-3.2%	7.4%	3.7%
Middlesex	6.3%	0.6%	-4.6%	8.9%	4.2%
Nantucket	3.8%	-2.8%	-12.8%	3.5%	4.0%
Norfolk	6.3%	-0.3%	-1.2%	6.8%	4.9%
Plymouth	7.2%	-1.4%	-3.2%	7.3%	3.7%
Suffolk	6.4%	-0.3%	-6.8%	11.8%	4.7%
Worcester	5.0%	1.2%	-2.7%	6.8%	4.3%
State Totals	5.5%	0.3%	-4.5%	8.8%	4.3%

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Table J: Domestic Travel-Generated Tax Revenue for Local Governments in Massachusetts by County, 2007-2011

Table J: Domestic Travel-Generated Tax Revenue for Local Governments in Massachusetts by County, 2007-2011					
<i>Tax Revenue for Local Governments (in \$ millions)</i>					
County	2007	2008	2009	2010	2011
Barnstable	\$46.8	\$48.4	\$45.5	\$49.2	\$51.5
Berkshire	8.9	8.9	8.3	9.2	9.8
Bristol	7.0	7.2	6.8	7.6	8.1
Dukes	6.3	6.3	5.9	6.6	7.0
Essex	16.5	16.9	16.1	18.3	19.3
Franklin	1.5	1.6	1.5	1.7	1.8
Hampden	8.1	8.2	8.0	8.9	9.5
Hampshire	2.7	2.7	2.5	2.8	3.0
Middlesex	50.4	51.2	47.9	54.0	57.1
Nantucket	5.5	5.4	4.6	4.9	5.2
Norfolk	17.2	17.3	16.8	18.6	19.8
Plymouth	21.0	20.9	19.9	22.1	23.2
Suffolk	112.9	113.7	103.9	120.4	127.0
Worcester	14.3	14.7	14.0	15.5	16.5
State Totals	\$319.1	\$323.5	\$301.8	\$339.9	\$358.6
<i>Percentage Change Over Previous Year</i>					
County	2007/2006	2008/2007	2009/2008	2010/2009	2011/2010
Barnstable	3.6%	3.4%	-6.0%	8.2%	4.6%
Berkshire	5.8%	0.2%	-7.0%	10.7%	6.4%
Bristol	3.6%	2.8%	-4.7%	11.1%	6.2%
Dukes	3.9%	0.1%	-6.0%	12.0%	4.8%
Essex	4.4%	2.1%	-4.7%	13.7%	5.5%
Franklin	4.7%	6.3%	-6.8%	12.2%	4.7%
Hampden	4.6%	2.1%	-2.5%	10.3%	7.1%
Hampshire	7.2%	0.1%	-5.1%	11.3%	5.8%
Middlesex	7.2%	1.6%	-6.4%	12.8%	5.6%
Nantucket	4.7%	-1.7%	-14.5%	7.3%	5.7%
Norfolk	7.1%	0.8%	-3.1%	10.7%	6.6%
Plymouth	8.0%	-0.3%	-5.1%	11.2%	5.0%
Suffolk	7.3%	0.8%	-8.6%	15.9%	5.5%
Worcester	5.8%	2.3%	-4.6%	10.7%	6.1%
State Totals	6.2%	1.4%	-6.7%	12.6%	5.5%

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APPENDICES

Appendix A: Travel Economic Impact Model

Introduction

The Travel Economic Impact Model (TEIM) was developed by the research department at U.S. Travel Association to provide annual estimates of the impact of the travel activity of U.S. residents on national, state and county economies in this country. It is a disaggregated model comprised of a variety of travel categories (described in Appendix B: Glossary of Terms). The TEIM estimates travel expenditures and the resulting business receipts, employment, personal income, and tax receipts generated by these expenditures.

The TEIM has the capability of estimating the economic impact of various types of travel, such as business and vacation, by transport mode and type of accommodations used, and other trip and traveler characteristics. The County Impact Component of the TEIM allows estimates of the economic impact of travel at the county and city level.

Definition of Terms

There is no commonly accepted definition of travel in use at this time. For the purposes of the estimates herein, *travel* is defined as activities associated with all overnight and day trips to places 50 miles away or more, one way, from the traveler's origin and any overnight trips away from home in paid accommodations.

The word *tourism* is avoided in this report because of its vague meaning. Some define tourism as all travel away from home while others use the dictionary definition that limits tourism to personal or pleasure travel.

The *travel industry*, as used herein, refers to the collection of 18 types of businesses that provide goods and services to the traveler or potential traveler at the retail level (see Glossary of Terms). With the exception of Amtrak and second home ownership and rental, these business types are defined by the Office of Management and Budget in the 1997 North American Industry Classification System (NAICS) and well as in its predecessor, the 1987 Standard Industrial Classification System (SIC). In each case, the relevant NAICS and SIC codes are included.

Travel *expenditure* is assumed to take place whenever traveler exchanges money for an activity considered part of his/her trip. Total travel expenditures are separated into related categories representing traveler purchases of goods and services at the retail level. One category, travel agents, receives no travel expenditures as these purchases are allocated to the category (i.e. air transportation) actually providing the final good or service to the traveler. Travel expenditures are allocated among states by simulating where the exchange of money for goods or service actually took place. By their nature, some travel expenditures are assumed to occur at the traveler's origin, some at his/her destination, and some enroute.

Economic impact is represented by measures of spending, employment, payroll, business receipts and tax revenues generated by traveler spending. *Payroll* includes all forms of compensation, such as salaries, wages, commissions, bonuses, vacation allowances, sick leave pay and the value of payments in kind paid during the year to all employees. Payroll is reported before deductions for social security, income tax insurance, union dues, etc. This definition follows that used by the U.S. Census Bureau in the quinquennial Census of Service Industries.

Employment represents the number of jobs generated by traveler spending, both full and part-time. As such, it is consistent with the U.S. Department of Labor series on nonagricultural payroll employment. *Tax revenues* include corporate income, individual income, sales and gross receipts, and excise taxes by level of government. *Business receipts* reflect travel expenditures less the sales and excise taxes imposed on those expenditures.

Description of the Model

Estimates of Travel Expenditures

Total travel expenditures includes spending by travelers on goods and services during their trips, such as lodging, transportation, meals, entertainment, retail shopping. The TEIM covers 18 categories of activities. Generally, the TEIM combines the activity levels for trips to places within the United States with the appropriate average costs of each unit of travel activity, (e.g., cost per mile by mode of transport, cost per night by type of accommodation), to produce estimates of the total amount spent on each of 18 categories of travel related goods and services by state. For example, the number of nights spent by travel parties in hotels in Massachusetts is multiplied by the average cost per night per travel party of staying in a hotel in the state to obtain the estimate of traveler expenditures for hotel accommodations. The estimates derived through the cost factor method are also validated through three additional methods: Household travel spending ratio method: the ratio of out of town spending to total household spending; Trip expenditure ratio method: the ratio of each travel spending category in a trip to that trip's total expenditures; and economic and business statistics validations.

The data on domestic travel activity levels (e.g., number of miles traveled by mode of transportation, the number of nights spent away from home by type of accommodation) are based on national travel surveys conducted by U.S. Travel Association, The Bureau of Labor Statistics' Survey of Consumer Expenditures, Smith Travel Research's Hotel and Motel Survey, etc. Average cost data are purchased and collected from various organizations and government agencies. Total sales, revenue and other data collected from state, local and federal governments and other organizations are employed to compare, adjust and update the spending database of TEIM, as well as linking spending to other impact components.

The international travel expenditure estimates are based on Tourism Industries' (OTTI) Survey of International Air Travelers and data provided to OTTI from Canada and Mexico. Other estimates of the economic impact of international visitors to the U.S. are generated by TEIM by incorporating the estimated international traveler expenditures with the data series utilized to produce the domestic estimates.

Estimates of Business Receipts, Payroll and Employment

The Economic Impact Component of the TEIM estimates travel generated business receipts, employment, and payroll. Basically, the 18 travel categories are associated with a type of travel-related business. For example, traveler spending on commercial lodging in a state is related to the business receipts, employment and payroll of hotels, motels and motor hotels (SIC 701; NAICS 7211) in the state. It is assumed that travel spending in each category, less sales and excise taxes, equals business receipts for the related business type as defined by the U.S. Census Bureau.

It is assumed that each job in a specific type of business in a state is supported by some amount of business receipts and that each dollar of wages and salaries is similarly supported by some dollar volume of business receipts. The ratios of employment to business receipts are computed for each industry in each state. These ratios are then multiplied by the total amount of business receipts generated by traveler

spending in a particular type of business to obtain the measures of travel generated employment and payroll of each type of business in each state. For example, the ratio of employees to business receipts in state commercial lodging establishments is multiplied by travel generated business receipts of these establishments to obtain traveler generated employment in commercial lodging. A similar process is used for the payroll estimates. The total sales, payroll and employment data of each travel related industry (by SIC and NAICS) are provided by and collected from state, local and federal governments, such as the Bureau of Labor Statistics, the Bureau of Economic Analysis, Census Bureau and The Bureau of Transportation Statistics.

Estimates of Tax Revenues

The Fiscal Impact Component of the TEIM is used to estimate traveler generated tax revenues of federal, state and local governments. The yield of each type of tax is related to the best measure of the relevant tax base available for each state consistent with the output of the Economic Impact Component. The ratios of yield to base for each type of tax in each state are then applied to the appropriate primary level output to obtain estimates of tax receipts generated by travel. For example, the ratio of Massachusetts State personal income tax collections to payroll in the state is applied to total travel generated payroll to obtain the estimate of state personal income tax receipts attributable to traveler spending in Massachusetts.

Estimates for Counties and Local Areas

Local area travel impact estimates are derived by distributing the state estimates to the area using proper proportions of each related category in the area. The proportions of a local area are calculated based on a set of data collected from federal, state and local governments and private organizations. The data can be gathered at the zip-code level. Consumer survey data is not used in local impact estimates due to the issue of small sample size.

The data used to estimate the local area shares includes sales, employment, payroll and taxes for all travel-related industry categories. Local data provided by states such as sales/tax receipts, employment and wages, attraction attendances, etc. are critical inputs. County and local sales, establishments, employment and payroll data derived from Economic Census, County Business Patterns and the Quarterly Census of Employment and Wages (QCEW) are also used in the model.

Limitations of the Study

This study is designed to indicate the impact of U.S. traveler expenditures on employment, payroll, business receipts and tax revenue in each of the states. These impact estimates reflect the limitations inherent in the definition of travel expenditures. Two important classes of travel-related expenses have

not been estimated due to various reasons. Consumers purchase certain goods and services in anticipation of a trip away from home. These include sports equipment (tennis racquet, skis, scuba gear, etc.), travel books and guides, and services such as language lessons and lessons for participatory sports (tennis, skiing, underwater diving, etc.). The magnitude of these purchases in preparation for a trip cannot be quantified due to lack of sound, relevant data.

The second type of spending not covered due to lack of sufficient data is the purchase of major consumer durables generally related to outdoor recreation on trips. Further research is required in this area to determine to what extent pre-trip spending on consumer durable products can justifiably be included within a travel economic impact study.

Brief Illustrations of TEIM Formula

Estimates of Travel Expenditure

- Travel spending in category i = level of the travel activity i * *per unit cost of the activity i*
Example: Spending on hotel rooms = nights stayed in hotel * average hotel room rate
- Total Travel Spending = \sum Travel Spending in category i , $i=1,2,3,\dots,18$

Estimates of Business Receipts, Payroll and Employment

For Category i

- Travel business receipts = estimated travel spending – (sales and excise taxes)
- Travel-generated payroll
= Total payroll of the industry / total sales of the industry * travel business receipts
- Travel-generated employment
= Total employment of the industry / total payroll of the industry * travel-generated payroll
- Total business receipts, payroll and employment are equal to the sum of all categories of each measurement respectively.

Estimates of Tax Revenues

The types of tax revenue included in the estimations:

- Retail sales and excise taxes
For each travel related industry:
Sales tax or excise tax revenue =
(tax rate (federal, state and local)) * estimated travel spending of the category
- Individual income tax
For each travel related industry:
Travel-generated personal income tax revenue =
(total state PI tax collection / total state PI) * estimated travel-generated personal income
- Corporate income tax and property tax are estimated in the same way.
- Total tax receipts for the federal, state and local government are equal to the sum of all kinds of taxes of all industries.

Estimates of Travel Economic Impact of counties (CTEIM)

- County share = measurement of the county / sum of all counties for the same measurement.
- Travel Impact on the county = county share * the state total (estimated by TEIM).

Appendix B: Glossary of Terms – TEIM

Automobile Transportation Expenditure. This category includes a prorated share of the fixed costs of owning an automobile, truck, camper, or other recreational vehicles, such as insurance, license fees, tax, and depreciation costs. Also included are the variable costs of operating an automobile, truck, camper, or other recreational vehicles on a trip, such as gasoline, oil, tires, and repairs. The costs of renting an automobile or other motor vehicle are included in this category as well.

Entertainment/Recreation Expenditure. Traveler spending on recreation facility user fees, admissions at amusement parks and attractions, attendance at nightclubs, movies, legitimate shows, sports events, and other forms of entertainment and recreation while traveling.

Food Expenditure. Traveler spending in commercial eating facilities and grocery stores or carry-outs, as well as on food purchased for off-premise consumption.

Incidental Purchase Expenditure. Traveler spending on retail trade purchases including gifts for others, medicine, cosmetics, clothing, personal services, souvenirs, and other items of this nature.

Lodging Expenditure. Traveler spending on hotels and motels, B&Bs, campgrounds and trailer parks, rental of vacation homes and other types of lodging.

Public Transportation Expenditures. This includes traveler spending on air, bus, rail and boat/ship transportation, and taxicab or limousine service between airports and central cities.

Travel-generated Tax Receipts. Those federal, state and local tax revenues attributable to travel in a defined area. For a given state locality, all or some of the taxes may apply. "Local" includes county, city or municipality, and township units of government actually collecting the receipts and not the level that may end up receiving it through intergovernmental transfers.

Federal. These receipts include corporate income taxes, individual income taxes, employment taxes, gasoline excise taxes, and airline ticket taxes.

State. These receipts include corporate income taxes, individual income taxes, sales and gross receipts taxes, and excise taxes.

Local. These include county and city receipts from individual and corporate income taxes, sales, excise and gross receipts taxes, and property taxes.

Appendix C: Travel Related Industry by NAICS

Travel industry categories: With the transition to NAICS, the U.S. Travel Association has adjusted its selection of the travel-related business types using the new NAICS codes and brought its travel economic research into conformity with NAICS. For measurement purposes, U.S. Travel Association's Travel Economic Impact Model tracks business activity in seven (7) major travel-related industry groups. The industry groups and subcategories used in the model are outlined below, followed by a detailed table of NAICS Codes. The share of travel in each of listed industries will depend on travel spending estimates for the related categories and are different from industries and areas.

Automobile Transportation: Gasoline service stations, passenger car rental, motor vehicle/parts dealers, automotive repairs and maintenance.

Entertainment/Recreation industry: Entertainment, art and recreation industry.

Foodservice industry: Eating & drinking places, and grocery stores.

Retail Trade industry: General merchandise group stores and miscellaneous retail stores, including gift and souvenir shops, and other retail stores.

Lodging industry: This industry includes hotels, motels, and motor hotels, camps and trailer parks.

Public Transportation industry: Air transportation, taxicab companies, interurban & rural bus transportation, railroad passenger transportation (Amtrak) and water passenger transportation. Also is the "dummy" industry of "other transportation."

Travel Arrangement industry: This includes travel agencies, tour operators, and other travel arrangement & reservation services.

TRAVEL RELATED INDUSTRY BY NAICS

Accommodations

7211 Traveler Accommodations
7212 Recreational Vehicle Parks & Campgrounds

Auto Transportation

532111 Passenger Car Rental
447 Gasoline Stations
4411 Automobile Dealers
4412 Other Motor Vehicle Dealers
4413 Automotive Parts, Accessories and Tire Stores
8111 Automotive Repair and Maintenance

Entertainment and Recreation

711 Performing Arts, Spectator Sports & Related Industries
712 Museums, Historical Sites & Similar Institutions
713 Amusement, Gambling & Recreation

Food

7221 Full service Restaurants
7222 Limited Service Eating Places
7224 Drinking Places
445 Food and Beverage stores

Public Transportation

481 Passenger Air Transportation
4881 Airport Support Activities
4821 Rail Transportation
4852 Interurban and Rural Bus Transportation
4853 Taxi & Limousine Services
485510 Charter Bus
483112 Deep Sea Passenger Transportation
483114 Coastal and Great Lakes Passenger Transportation
483212 Inland Water Passenger Transportation
487 Scenic & Sightseeing Transportation

Retail

451 Sporting Goods, Hobby, Book, and Music Stores
452 General Merchandise Stores
453 Miscellaneous Store Retailers
443 Electronics and Appliance Stores
444 Building Material and Garden Equipment and Supplies Dealers
446 Health and Personal Care Stores
448 Clothing and Clothing Accessories Stores

Travel Arrangement

5615 Travel Arrangement & Reservation Services (includes travel agencies and tour operators)

Appendix D: Sources of Data

This appendix presents the sources of data used in this report.

Organizations

Airlines for America (A4A), (formerly known as Air Transport Association of America - ATA)
American Automobile Association
Amtrak
American Society of Travel Agents
Bureau of Census, U.S. Department of Commerce
Bureau of Economic Analysis, U.S. Department of Commerce
Bureau of Labor Statistics, U.S. Department of Labor
Bureau of Transportation Statistics, U.S. Department of Commerce
Federal Aviation Administration, U.S. Department of Transportation
Federal Highway Administration, U.S. Department of Transportation
National Park Service
Massachusetts Office of Travel and Tourism
Massachusetts Department of Revenue
Smith Travel Research
OTTI/International Trade Administration, U.S. Department of Commerce
U.S. Travel Association

Appendix E: RIMS II

REGIONAL INPUT-OUTPUT MODELING SYSTEM

A BRIEF DESCRIPTION

Regional Economic Analysis Division
Bureau of Economic Analysis
U.S. Department of Commerce
Washington, D.C. 20230
(202) 523-0594

RIMS II

Many types of public sector and private sector decisions require an evaluation of probable regional effects. For example, Federal requirements for environmental impact statements and the urban impact of Federal policies necessitate regional impact analyses. A growing concern, therefore, about the effects of public and private decisions has created a demand for regional economic models.

As a result of this demand, economic impact models have been developed for many States and regions. These models vary considerably in terms of structure, reliability, sectoral and geographical detail, flexibility in application, and cost of development and use. In general, the models that provide the most reliable and industrially-detailed secondary impact estimates are the most expensive to construct, while the less costly models that can be used in numerous small-area studies often provide less accurate estimates.

In response to the growing need for improved techniques for regional impact analysis, the Regional Economic Analysis Division of the Bureau of Economic Analysis (BEA) developed the Regional Industrial Multiplier System (RIMS) in the mid-1970's. RIMS was designed to estimate input-output type multipliers for use in estimating the secondary regional impacts of public and private economic development policies. RIMS was capable of estimating multipliers for any region composed of one or more contiguous counties and for any of the 478 industrial sectors in the 1967 BEA national input-output (I-O) table. A significant improvement over the more summary measures often used in regional impact analysis, RIMS was capable of providing reliable multiplier estimates without the high cost of gathering survey data.

The Regional Input-Output Modeling System (RIMS II) is a major revision of RIMS. The basic differences between RIMS II and RIMS are the use of more recent national I-O tables (1987), the use of more detailed and more current data for regionalizing the national I-O tables, and greater flexibility in the derivation of regional impact estimates through the use of a matrix inversion technique that provides industrially-disaggregated impacts. RIMS II developmental research is focused currently on estimating regional transaction tables, and comparing RIMS II estimates of state-specific imports and exports with survey-based estimates from the Census Bureau's Commodity Transportation Survey. RIMS II is also being adapted to analyze the regional and industrial impacts of defense procurement.

RIMS II METHODOLOGY

In order to estimate impacts such as those presented above, RIMS II uses the BEA national I-O tables that show the input and output structure of 500 industries. Since firms in all national industries are not found in each region, some direct requirements that are not produced in a study region are identified, using Bureau of Economic Analysis (BEA) 4-digit Standard Industrial Classification (SIC) county earnings data. The earnings data are used as proxies for the industry-specific input and output data which are seldom available at the small-area level. Using the same earning data, the resulting regional I-O table then can be aggregated to the level of industrial detail appropriate for the impact study. More specifically, the RIMS II approach can be viewed as three-step process. In the first step, the national I-O matrix is made region-specific by using corresponding 4-digit SIC location quotients (LQ's). The LQ's are used to estimate the extent to which requirements are supplied by firms within the region. For this purpose, RIMS II employs LQ's based on two types of data. According to this mixed- LQ Approach, BEA county personal income data, by place of residence, are used for the calculation of LQ's in the service sectors, while BEA earnings data, by place of work, are used for the LQ's in the nonservice sectors.

The second step involves estimations of the household row and the household column of the matrix. The household-row coefficients are estimated based on value-added gross-output ratios from the national I-O table and introduced into each industry's coefficient column. A household column is constructed, based on national consumption and savings rate data and national and regional tax rate data.

The last step in the RIMS II estimating procedure is to calculate the multipliers. Since it is most often necessary to trace the impact of changes in final demand on numerous individual directly-and indirectly-affected industries, RIMS II applications employ the Leontief inversion approach for obtaining multipliers. This inversion process produces output and earnings multipliers for all additionally affected industries.

ACCURACY OF RIMS II

Empirical test of the accuracy of RIMS II multipliers indicates that RIMS II yields estimates that are not substantially different from those generated by regional I-O models based on the costly gathering of survey data. For example, a comparison of 224 industry-specific multipliers from survey based tables for Illinois, Washington, and West Virginia indicate that the RIMS II average multipliers overestimate the average multipliers from the survey based tables by approximately 5 percent, and, for the majority of individual industry-specific multipliers is less than 10 percent. In addition, RIMS II and survey multipliers show a statistically-similar distribution of affected industries.

ADVANTAGES OF RIMS II

There are numerous advantages to RIMS II. First, it is possible to provide estimates of economic impact without building a complete survey I-O model for each region under study, since RIMS II produces multipliers that are derived from secondary data sources. Second, the RIMS II multipliers are derived from a limited number of secondary data sources, thus eliminating the costs associated with the compilation of data from a wide variety of these sources. Third, because of the disaggregated sectoring plan employed by RIMS II, analysis may be performed at a detailed industrial level, thereby avoiding aggregation errors that often occur when different industries are combined. Fourth, the RIMS II multipliers are based on a consistent set of procedures across areas, thus making comparisons among areas more meaningful than would be the case if the results were obtained from incompatible impact models designed only for an individual area. Fifth, the multipliers can be updated to reflect the most recent local area earning and personal income data.

The industrial output and personal earnings impacts estimated by RIMS II can be crucial for estimating effects not directly specified by RIMS II itself. For example, the estimation of regional, fiscal, labor migration and environmental effects often depends on the estimation of the regional output and earnings impact of the initial stimulus. Since many of these important effects are often best analyzed on a case-by-case basis, one of the major advantages of using RIMS II is that valuable research resources can be spent on the analysis of these effects, rather than on the construction of an impact model. Therefore, when using RIMS II, a cost-effective impact study might devote most of its research budget to specifying initial impacts in industry specific detail, and analyzing the implications for other important aspects of regional economic activity of the RIMS II estimates impacts.

This overview briefly describes RIMS II multiplier, the multiplier-estimation procedures, and some of the advantages and uses for RIMS II. For additional information, see *Regional Multipliers, A User Handbook*

for the Regional Input-Output Modeling System (RIMS II), third edition. This handbook is produced by the U.S. Department of Commerce and available from the U.S. Government Printing Office.