The Economic Impact Of Travel on Massachusetts Counties 2012

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 2013

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 2012 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 2012 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 2012 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 2012, total domestic and international travel output in Massachusetts, including direct, indirect and induced output, amounted to $28.2 billion, up 4.7 percent from 2011.

- Domestic and international travel supported a total of 204,500 jobs for the travel industry and other industry sectors in Massachusetts during 2012, a 1.2 percent increase from 2011.

- Employees supported directly and indirectly by travel in Massachusetts earned a total of $7.2 billion in 2012, up 2.9 percent from 2011.

Direct Impact of Travel

- Domestic and international travelers directly spent $17.7 billion in Massachusetts during 2012, up 4.9 percent from 2011. Domestic traveler spending increased 5.4 percent, while international traveler spending increased 1.7 percent.

- Payroll income generated by direct traveler spending in Massachusetts totaled $3.7 billion during 2012, up 3.1 percent from 2011.

- Travel expenditures directly generated 126,500 jobs within Massachusetts in 2012, up 1.4 percent from 2011. Travel-generated jobs in Massachusetts comprised 3.9 percent of the total non-farm employment in the state during 2012.

- On average, every $140,283 spent in Massachusetts by domestic and international travelers generated one job in 2012.

- Traveler spending in Massachusetts directly generated nearly $2.6 billion in tax revenue for federal, state and local governments in 2012, up 4.0 percent from 2011.

- Suffolk County, which includes the city of Boston, received more than $7.4 billion in domestic travel expenditures, which leads all Massachusetts counties during 2012.

TRAVEL IMPACT ON U.S. ECONOMY IN 2012

National Summary

The U.S. economy continued to grow at a moderate pace in 2012. After increasing 2.5 percent in 2010 and 1.8 percent in 2011, real GDP in chained 2009 dollars grew 2.8 percent from 2011. During the first three quarters of the year, real GDP grew at an average annual rate of 2.6 percent, with consumption and fixed investment (especially residential investment) leading the way. However, the economy slowed in the fourth quarter, with GDP edging up at an annual rate of just 0.1 percent. This slowdown was caused by declines in government spending and goods exports and deceleration in business inventory investment. Together, these factors more than offset continued growth in consumer spending and business and residential fixed investment.

The U.S. employment situation continued to improve as well. A total of 2.2 million non-farm jobs were added during the 12 months of 2012. This increase helped reduce the unemployment rate from 8.9 percent in 2011 to 8.1 percent in 2012. However, the non-farm employment level by end of 2012 still remained 2.4 percent (3.4 million) below the peak employment level reached in January 2008.

The Consumer Price Index (CPI), an indicator of the level of price inflation, rose 2.1 percent in 2012. The U.S. Travel Association's Travel Price Index (TPI) increased at a roughly the same rate (2.3 percent) during the same period. Motor fuel and airline fare price increases have slowed from the double-digit price increases during the past two years, keeping the TPI more in-line with the rest of the economy.

U.S. economic growth improved in the first quarter of 2013. Real GDP grew by 1.1 percent (annualized) in the first quarter of 2013 and 2.5 percent in the second quarter, a significant improvement on the performance of the economy in the fourth quarter of 2012. Improvements in consumer spending, exports and inventory investment in the first quarter of 2013 more than offset a continued declined in government spending and a slowdown in business investment.

Through the first eight months of 2013, the unemployment rate decreased to 7.3 percent in August, and a total of 1,442,000 jobs have been added since December 2012. Inflation has also remained moderate. Through the first eight months of 2013, the CPI increased just 1.6 percent compared to the first eight months of 2012. Similarly the TPI rose just 1.4 percent over the same timeframe.

Table 1: Overall U.S. Economic Indicators, 2010-2012

Sector	2010	2011	2012
Nominal gross domestic product ($Billions)	14,958.3	15,533.8	16,244.6
Real gross domestic product ($ Billions)*	14,779.4	15,052.4	15,470.7
Real disposable personal income ($Billions)*	11,060.8	11,324.6	11,551.6
Real personal consumption expenditures ($Billions)*	10,035.9	10,291.3	10,517.6
Consumer price index**	218.1	224.9	229.6
Travel Price Index	250.7	266.9	273.0
Non-farm payroll employment (Millions)	129.9	131.5	133.7
Unemployment rate (%)	9.6	8.9	8.1
Percentage change from previous year			
Nominal gross domestic product	3.7%	3.8%	4.6%
Real gross domestic product	2.5%	1.8%	2.8%
Real disposable personal income	1.1%	2.4%	2.0%
Real personal consumption expenditures	2.0%	2.5%	2.2%
Consumer price index	1.6%	3.2%	2.1%
Travel Price Index	3.8%	6.5%	2.3%
Non-farm payroll employment	-0.7%	1.2%	1.7%

Source: BEA, BLS, U.S. Travel Association

** In chained 2009 dollars.*

*** 1982-84=100.*

U.S. Travel Volume in 2012

U.S. domestic travel, including leisure and business travel increased 1.6 percent to a total of 2,030 million person-trips in 2012. 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 leisure travel, which includes visits to friends and relatives as well as trips taken for outdoor recreation and entertainment purposes, increased 1.8 percent in 2012, totaling 1,571 million person-trips and is forecasted to increase 1.4 percent in 2013. Leisure travel accounted for 77.4 percent of all U.S. domestic travel in 2012. Domestic business travel grew 1.1 percent in 2012 to 459 million person-trips. International inbound travelers, including visitors from overseas, Canada and Mexico, made 66.9 million visits to the United States in 2012, up 6.8 percent from 2011.

Travel Expenditures in 2012

Domestic and international travel spending in the U.S. increased 5.3 percent over 2011 to $855.4 billion in 2012. Leisure travelers' spending increased 5.8 percent while business travel spending was up 3.9 percent in the year.

Domestic travelers directly spent $726.9 billion in 2012, a 4.4 percent increase from 2011. This increase reflected greater demand for U.S. goods and services, as TPI grew only modestly over this period. Domestic travel expenditures are expected to grow 3.6 percent in 2013, moderating after the post-recession surge.

International travelers spent $128.6 billion in the U.S. during 2012, up 10.7 percent from 2011. In addition, international travelers paid a total of $39.5 billion to U.S. air carriers on international passenger fares in 2012, an increase of 7.6 percent from 2011. As a result, a nearly $50.0 billion travel trade surplus was generated in 2012, the largest surplus in the past 50 years and $6.7 billion greater than the 2011 travel trade surplus. International traveler spending in the U.S. is estimated to increase 5.8 percent in 2013.

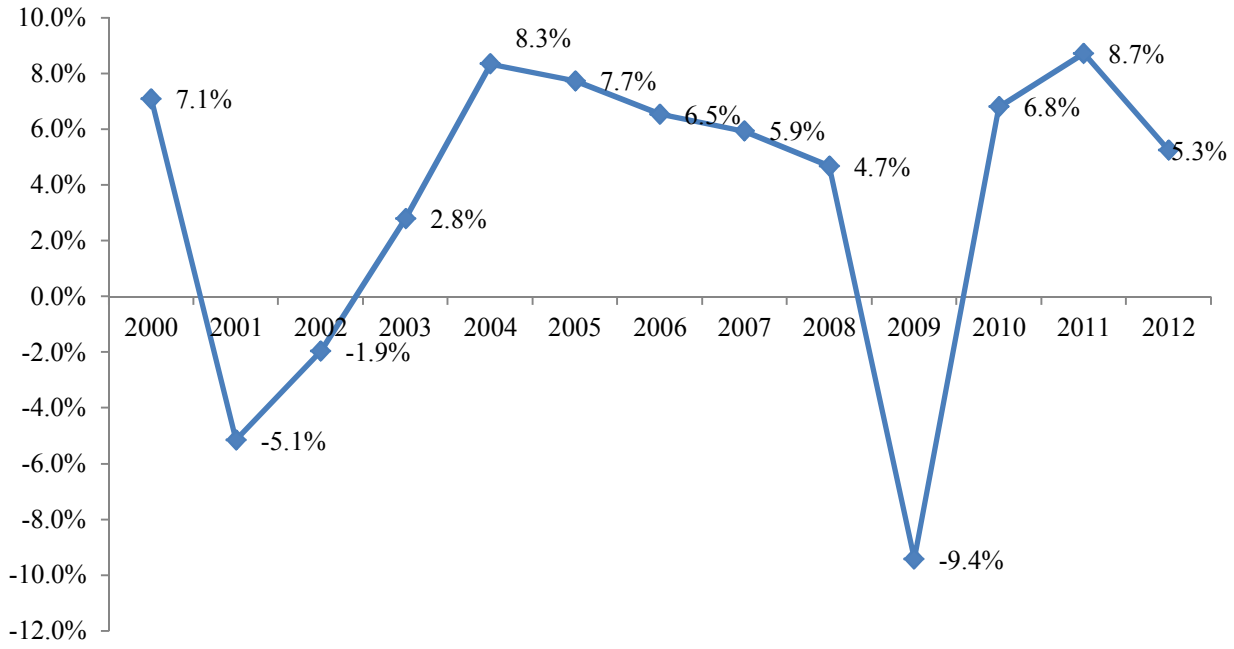
Real travel and tourism spending in chained 2005 dollars increased 3.5 percent in 2012, an increase for the third consecutive year since 2010. The price of travel goods and services increased 2.3 percent in 2012 after increasing 6.5 percent in 2011, according to the U.S. Travel Association's Travel Price Index (TPI). The TPI is expected to increase 2.0 in 2013.

Table 2: Travel Expenditures - U.S. Nationwide

Category	2011 Spending ($ Billions) Domestic	Intl.*	Total	2012 Spending ($ Billions) Domestic	Intl.*	Total
Public Transportation	$142.6	$13.6	$156.2	$148.3	$14.5	$162.8
Auto Transportation	145.7	1.4	147.1	153.4	1.6	155
Lodging	116	31.4	147.4	122.8	35.6	158.4
Foodservice	167.6	24.4	191.9	174.2	27.2	201.4
Entertainment & Recreation	75.6	9.8	85.4	79.2	10.5	89.7
General Retail Trade	49.1	35.6	84.7	48.9	39.3	88.2
Total	**$696.5**	**$116.1**	**$812.7**	**$726.9**	**$128.6**	**$855.4**

Source: U.S. Travel Association
** Excludes international passenger fare payments.*

Changes of Direct Travel Expenditures* in the U.S., 2001-2012p



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

Travel Employment in 2012

The unemployment rate in the U.S. took another step down from its 25-year 9.6 percent peak in 2010. The 2012 unemployment rate dropped another 0.8 percentage points from 2011 to 8.1 percent. Total non-farm employment in the U.S. increased 1.7 percent in 2012, ticking upward for the second consecutive year after three years of decline. In 2012, travel directly generated nearly 7.7 million U.S. jobs, an increase of 1.9 percent from 2011. Travel-generated jobs accounted for 5.7 percent of total non-farm employment in the U.S. in 2012.

In the current recovery, travel and tourism has proven itself to be one of the most efficient job-creating engines of the U.S. economy. From when the employment recovery began in early 2010 through August 2013, the travel industry added 431,000 jobs, accounting for 6.3 percent of all nonfarm payroll jobs added during this time and making up 91 percent of the travel industry jobs lost during the recession. Moreover, through August 2013, the travel industry has added jobs at a 12 percent faster pace than the rest of the economy.

Table 3: Travel-Generated Employment - U.S. Nationwide

	2011 Employment (Thousands)			2012 Employment (Thousands)		
Category	Domestic	Intl.*	Total	Domestic	Intl.*	Total
Public Transportation	886.0	66.4	952.4	893.9	68.2	962.1
Auto Transportation	251.3	2.0	253.2	257.4	2.1	259.5
Lodging	1,188.9	246.8	1,435.7	1,186.9	260.8	1,447.7
Foodservice	2,584.6	385.0	2,969.6	2,634.2	415.6	3,049.8
Entertainment & Recreation	1,065.8	215.3	1,281.0	1,083.1	221.6	1,304.7
General Retail Trade	316.8	160.5	477.3	314.4	171.2	485.6
Travel Planning	160.9	0.0	160.9	162.9	0.0	162.9
Total	**6,454.2**	**1,075.9**	**7,530.1**	**6,532.9**	**1,139.5**	**7,672.3**

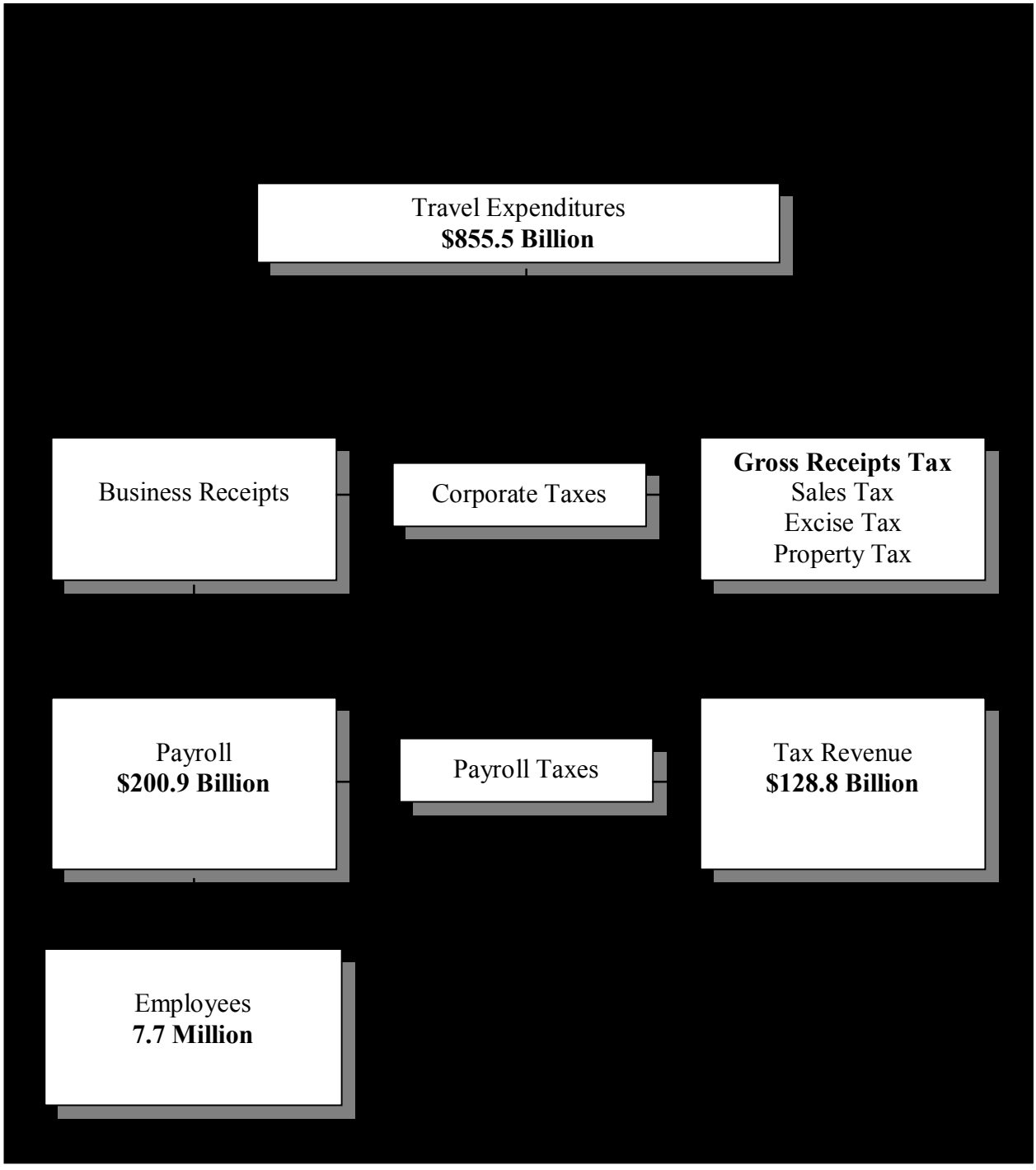
Source: U.S. Travel Association

** Excludes jobs supported by international passenger fare payments.*

Table 4: U.S. Travel Forecasts

	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
Real GDP ($ Billions)*	14,876.8	14,833.6	14,417.9	14,779.4	15,052.4	15,470.7	15,826.5	16,269.7	16,757.8	17,260.5
Unemployment Rate (%)	4.6	5.8	9.3	9.6	8.9	8.1	7.7	6.7	5.9	5.3
Consumer Price Index (CPI)**	207.3	215.3	214.5	218.1	224.9	229.6	234.0	238.8	243.9	248.4
Travel Price Index (TPI)	244.0	257.7	241.5	250.7	266.9	273.0	278.5	286.0	294.5	303.5
Total Travel Expenditures in U.S. ($ Billions)	738.0	772.5	699.8	747.4	812.7	855.4	889.1	928.1	972.5	1,016.3
U.S. Residents	640.6	662.1	605.6	643.9	696.5	726.9	753.1	782.2	816.5	849.7
International Visitors***	97.4	110.4	94.2	103.5	116.1	128.6	136.0	145.9	156.0	166.6
Total International Visitors to the U.S. (Millions)	56.0	57.9	54.9	59.7	62.3	66.6	68.8	72.3	78.0	81.2
Overseas Arrivals the U.S. (Millions)	23.9	25.3	23.8	26.4	27.9	29.6	30.9	32.7	34.9	36.6
Total Domestic Person-Trips (Millions)	2,005.0	1,965.0	1,900.0	1,964.0	1,998.0	2,030.0	2,057.0	2,095.0	2,133.0	2,161.0
Business	494.3	461.1	437.7	449.5	453.9	459.0	464.5	469.9	475.7	480.5
Leisure	1,510.2	1,503.8	1,462.4	1,514.2	1,543.6	1,571.3	1,592.9	1,625.0	1,656.9	1,680.1
Percent Change from Previous Year (%)										
Real GDP	1.8	-0.3	-2.8	2.5	1.8	2.8	2.3	2.8	3.0	3.0
Consumer Price Index (CPI)*	2.8	3.8	-0.3	1.6	3.1	2.1	1.9	2.1	2.1	1.9
Travel Price Index (TPI)	4.5	5.6	-6.3	3.8	6.5	2.3	2.0	2.7	3.0	3.1
Total Travel Expenditures in U.S.	6.1	4.7	-9.4	6.8	8.7	5.3	3.9	4.4	4.8	4.5
U.S. Residents	4.9	3.4	-8.5	6.3	8.2	4.4	3.6	3.9	4.4	4.1
International Visitors**	13.0	13.4	-14.7	9.9	12.2	10.7	5.8	7.3	6.9	6.8
Total International Visitors to the U.S.	9.8	3.5	-5.3	8.9	4.3	6.8	3.4	5.0	7.9	4.1
Overseas Arrivals the U.S.	10.1	6.1	-6.3	11.0	5.8	6.2	4.5	5.6	6.8	4.9
Total Domestic Person-Trips	0.2	-2.0	-3.3	3.3	1.7	1.6	1.3	1.8	1.8	1.3
Business	-2.9	-6.7	-5.1	2.7	1.0	1.1	1.2	1.2	1.2	1.0
Leisure	1.2	-0.4	-2.8	3.5	1.9	1.8	1.4	2.0	2.0	1.4

Sources: U.S. Travel Association
** In chained 2009 dollars.*
***1982-84=100.*
**** International traveler spending does not include international passenger fares.*



Source: U.S. Travel Association, BEA
**Does not include international passenger fare payments and other economic impact generated by these payments.*

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TRAVEL IMPACT ON MASSACHUSETTS - 2012

TRAVEL IMPACT ON MASSACHUSETTS - 2012

Travel Expenditures

Domestic and international travelers in Massachusetts directly spent $17.7 billion on transportation, lodging, food, entertainment and recreation, and retail shopping during 2012, representing an increase of 4.9 percent from 2011. Domestic travelers spent $15.4 billion, while international travelers spent $2.3 billion, up 5.4 percent and 1.7 percent, respectively, from 2011.

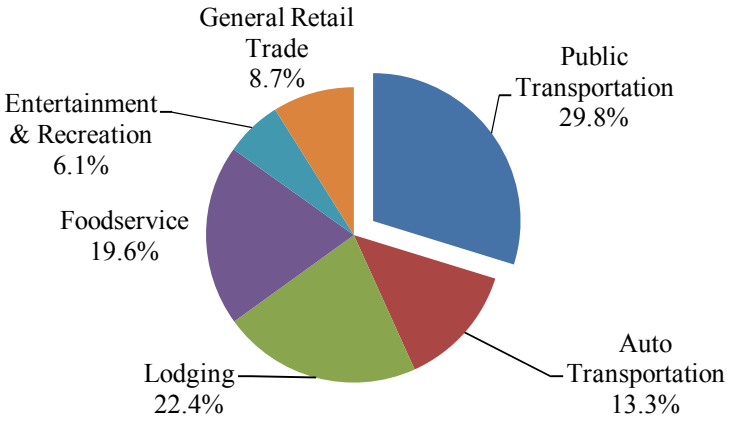
In 2012, domestic and international travelers spent $5.3 billion on public transportation, up 5.2 percent from 2011.

Domestic and international travelers spent almost $4.0 billion on lodging during 2011, an increase of 7.6 percent from 2011. According to Smith Travel Research, hotel rooms demand increased by 1.5 percent in 2012 while the average daily room rate increased at a much faster pace of 6.7 percent.

Spending on foodservice by domestic and international travelers totaled nearly $3.5 billion, up 3.8 percent from 2011.

Domestic and international travel spending on auto transportation increased by 3.9 percent in 2012 to nearly $2.4 billion.

Travel Spending in Massachusetts in 2012 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, 2011-2012

2012 Expenditures	Domestic ($ Millions)	International ($ Millions)	Total ($ Millions)	% of Total
Public Transportation	$5,008.1	$285.9	$5,293.9	29.8%
Auto Transportation	2,329.8	34.3	2,364.1	13.3%
Lodging	3,165.4	812.1	3,977.5	22.4%
Foodservice	3,031.4	442.2	3,473.6	19.6%
Entertainment & Recreation	897.4	186.9	1,084.4	6.1%
General Retail Trade	973.7	572.4	1,546.2	8.7%
Total	$15,405.8	$2,333.8	$17,739.6	100.0%
2011 Expenditures				
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%

Percentage change 2012 over 2011	Domestic (%)	International (%)	Total (%)
Public Transportation	5.6%	-0.6%	5.2%
Auto Transportation	4.0%	-0.9%	3.9%
Lodging	8.4%	4.7%	7.6%
Foodservice	4.3%	0.7%	3.8%
Entertainment & Recreation	3.2%	0.8%	2.8%
General Retail Trade	3.7%	0.1%	2.3%
Total	5.4%	1.7%	4.9%

Source: U.S. Travel Association

Table 6: Direct Travel Expenditures in Massachusetts by Industry Sector, 2008-2012

(Expenditures in millions of dollars)

	2008	2008	2008	2009	2009	2009	2010	2010	2010	2011	2011	2011	2012	2012	2012
Expenditures	Dom	Int'l	Total	Dom	Int'l	Total	Dom	Int'l	Total	Dom	Int'l	Total	Dom	Int'l	Total
Public Transportation	4,419.0	265.3	4,684.3	3,893.3	237.8	4,131.1	4,322.0	253.7	4,575.7	4,744.7	287.7	5,032.4	5,008.1	285.9	5,293.9
Auto Transportation	2,016.5	29.2	2,045.8	1,811.9	26.6	1,838.4	1,952.6	29.5	1,982.0	2,240.7	34.6	2,275.3	2,329.8	34.3	2,364.1
Lodging	2,851.4	712.6	3,564.0	2,467.5	628.0	3,095.5	2,728.3	687.5	3,415.8	2,920.0	775.7	3,695.6	3,165.4	812.1	3,977.5
Foodservice	2,605.4	375.9	2,981.3	2,601.6	379.3	2,980.9	2,748.8	395.1	3,143.8	2,906.1	439.0	3,345.0	3,031.4	442.2	3,473.6
Entertainment & Rec.	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	897.4	186.9	1,084.4
General Retail Trade	857.0	488.5	1,345.5	853.7	497.8	1,351.5	897.2	518.2	1,415.4	939.1	571.7	1,510.8	973.7	572.4	1,546.2
Total	13,539.5	2,037.3	15,576.8	12,419.2	1,933.5	14,352.6	13,475.0	2,054.9	15,529.9	14,619.8	2,294.0	16,913.8	15,405.8	2,333.8	17,739.6
% Change*	Dom	Int'l	Total	Dom	Int'l	Total	Dom	Int'l	Total	Dom	Int'l	Total	Dom	Int'l	Total
Public Transportation	0.6%	14.4%	1.3%	-11.9%	-10.4%	-11.8%	11.0%	6.7%	10.8%	9.8%	13.4%	10.0%	5.6%	-0.6%	5.2%
Auto Transportation	5.6%	18.9%	5.8%	-10.1%	-9.1%	-10.1%	7.8%	10.8%	7.8%	14.8%	17.4%	14.8%	4.0%	-0.9%	3.9%
Lodging	-0.2%	11.0%	1.9%	-13.5%	-11.9%	-13.1%	10.6%	9.5%	10.3%	7.0%	12.8%	8.2%	8.4%	4.7%	7.6%
Foodservice	2.2%	14.7%	3.7%	-0.1%	0.9%	0.0%	5.7%	4.2%	5.5%	5.7%	11.1%	6.4%	4.3%	0.7%	3.8%
Entertainment & Rec.	2.7%	11.5%	4.1%	0.1%	-1.0%	-0.1%	4.4%	4.2%	4.4%	5.2%	8.4%	5.8%	3.2%	0.8%	2.8%
General Retail Trade	-1.5%	15.4%	4.0%	-0.4%	1.9%	0.4%	5.1%	4.1%	4.7%	4.7%	10.3%	6.7%	3.7%	0.1%	2.3%
Total	1.4%	13.3%	2.9%	-8.3%	-5.1%	-7.9%	8.5%	6.3%	8.2%	8.5%	11.6%	8.9%	5.4%	1.7%	4.9%
% of Total	Dom	Int'l	Total	Dom	Int'l	Total	Dom	Int'l	Total	Dom	Int'l	Total	Dom	Int'l	Total
Public Transportation	32.6%	13.0%	30.1%	31.3%	12.3%	28.8%	32.1%	12.3%	29.5%	32.5%	12.5%	29.8%	32.5%	12.2%	29.8%
Auto Transportation	14.9%	1.4%	13.1%	14.6%	1.4%	12.8%	14.5%	1.4%	12.8%	15.3%	1.5%	13.5%	15.1%	1.5%	13.3%
Lodging	21.1%	35.0%	22.9%	19.9%	32.5%	21.6%	20.2%	33.5%	22.0%	20.0%	33.8%	21.8%	20.5%	34.8%	22.4%
Foodservice	19.2%	18.5%	19.1%	20.9%	19.6%	20.8%	20.4%	19.2%	20.2%	19.9%	19.1%	19.8%	19.7%	18.9%	19.6%
Entertainment & Rec.	5.8%	8.1%	6.1%	6.4%	8.5%	6.7%	6.1%	8.3%	6.4%	5.9%	8.1%	6.2%	5.8%	8.0%	6.1%
General Retail Trade	6.3%	24.0%	8.6%	6.9%	25.7%	9.4%	6.7%	25.2%	9.1%	6.4%	24.9%	8.9%	6.3%	24.5%	8.7%
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 – 2012

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 3.1 percent from 2011, totaling $3.7 billion in 2012.

Among this total, $3.2 billion in payroll income was directly generated by domestic travel, a 3.6 percent increase from 2011. International travelers' spending in the state directly generated $516.4 million in payroll income for Massachusetts' travel industry employees, up 0.2 percent from 2011.

On average, every dollar spent by domestic and international travelers produced $0.21 in payroll income for Massachusetts' residents during 2012.

Compared with 2011, travel-generated payroll for the travel planning sector showed the most growth among seven sectors investigated, up 5.8 percent. Payroll for the public transportation sector increased 3.7 percent from 2011.

The average payroll income generated by direct travel in Massachusetts stood at $29,592 in 2012, an increase of 1.7 percent from 2011.

Travel-Generated Payroll in Massachusetts in 2012 Industry Sector

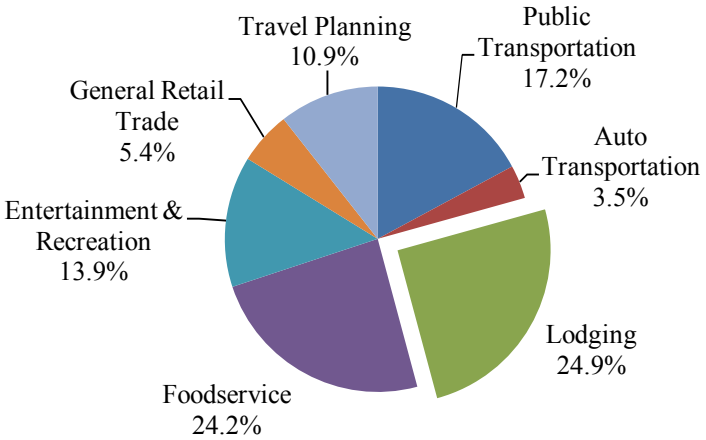


Table 7: Direct Travel-Generated Payroll in Massachusetts by Industry Sector, 2011-2012

2012 Payroll	Domestic ($ Millions)	International ($ Millions)	Total ($ Millions)	% of Total
Public Transportation	$612.5	$31.9	$644.4	17.2%
Auto Transportation	128.7	2.2	130.9	3.5%
Lodging	746.3	187.3	933.6	24.9%
Foodservice	786.3	118.9	905.2	24.2%
Entertainment & Recreation	427.1	92.5	519.6	13.9%
General Retail Trade	117.8	83.5	201.3	5.4%
Travel Planning *	407.0	0.0	407.0	10.9%
Total	$3,225.7	$516.4	$3,742.0	100.0%
2011 Payroll				
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%
Percentage change 2012 over 2011	Domestic (%)	International (%)	Total (%)	
Public Transportation	4.0%	-2.1%	3.7%	
Auto Transportation	1.5%	-3.3%	1.4%	
Lodging	2.6%	1.5%	2.4%	
Foodservice	3.8%	0.2%	3.3%	
Entertainment & Recreation	3.8%	1.3%	3.3%	
General Retail Trade	0.7%	-2.7%	-0.7%	
Travel Planning *	5.8%		5.8%	
Total	3.6%	0.2%	3.1%	

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.*

Table 8: Direct Travel-Generated Payroll in Massachusetts by Industry Sector, 2008-2012

(Payroll in millions of dollars)

	2008	2008	2008	2009	2009	2009	2010	2010	2010	2011	2011	2011	2012	2012	2012
Payroll	Dom	Int'l	Total	Dom	Int'l	Total	Dom	Int'l	Total	Dom	Int'l	Total	Dom	Int'l	Total
Public Trans.	567.4	31.0	598.5	544.7	30.3	575.0	555.3	29.7	585.0	588.9	32.5	621.4	612.5	31.9	644.4
Auto Trans.	125.9	2.1	128.0	124.2	2.1	126.3	122.6	2.1	124.7	126.8	2.3	129.1	128.7	2.2	130.9
Lodging	751.1	187.2	938.3	676.6	171.7	848.3	696.0	174.9	870.9	727.4	184.7	912.0	746.3	187.3	933.6
Foodservice	744.9	111.4	856.3	724.4	109.5	833.9	733.3	109.3	842.6	757.5	118.6	876.2	786.3	118.9	905.2
Entertainment & Rec.	407.5	88.9	496.3	389.4	84.0	473.4	404.2	87.0	491.2	411.6	91.3	503.0	427.1	92.5	519.6
General Retail Trade	114.8	78.8	193.6	114.4	80.4	194.8	115.0	80.0	195.0	117.0	85.8	202.8	117.8	83.5	201.3
Travel Planning	439.1		439.1	355.9		355.9	366.3		366.3	384.5		384.5	407.0		407.0
Total	3,150.6	499.5	3,650.1	2,929.5	478.0	3,407.5	2,992.6	478.0	3,407.5	3,113.7	515.3	3,629.0	3,225.7	516.4	3,742.0
% Change*	Dom	Int'l	Total	Dom	Int'l	Total	Dom	Int'l	Total	Dom	Int'l	Total	Dom	Int'l	Total
Public Trans.	-4.3%	8.8%	-3.7%	-4.0%	-2.4%	-3.9%	1.9%	-2.0%	1.7%	6.1%	9.6%	6.2%	4.0%	-2.1%	3.7%
Auto Trans.	-1.4%	10.9%	-1.2%	-1.4%	-0.3%	-1.4%	-1.3%	1.5%	-1.3%	3.5%	5.9%	3.5%	1.5%	-3.3%	1.4%
Lodging	1.0%	12.3%	3.0%	-9.9%	-8.3%	-9.6%	2.9%	1.8%	2.7%	4.5%	5.6%	4.7%	2.6%	1.5%	2.4%
Foodservice	1.4%	13.7%	2.8%	-2.8%	-1.7%	-2.6%	1.2%	-0.2%	1.0%	3.3%	8.6%	4.0%	3.8%	0.2%	3.3%
Entertainment & Rec.	2.3%	11.1%	3.8%	-4.4%	-5.5%	-4.6%	3.8%	3.6%	3.8%	1.8%	4.9%	2.4%	3.8%	1.3%	3.3%
General Retail Trade	-4.8%	11.6%	1.3%	-0.3%	1.9%	0.6%	0.5%	-0.4%	0.1%	1.7%	7.2%	4.0%	0.7%	-2.7%	-0.7%
Travel Planning	4.9%		4.9%	-19.0%		-19.0%	2.9%		2.9%	5.0%		5.0%	5.8%		5.8%
Total	0.4%	12.0%	1.9%	-7.0%	-4.3%	-6.6%	2.2%	0.0%	0.0%	4.0%	7.8%	6.5%	3.6%	0.2%	3.1%
% of Total	Dom	Int'l	Total	Dom	Int'l	Total	Dom	Int'l	Total	Dom	Int'l	Total	Dom	Int'l	Total
Public Trans.	18.0%	6.2%	16.4%	18.6%	6.3%	16.9%	18.6%	6.2%	17.2%	18.9%	6.3%	17.1%	19.0%	6.2%	17.2%
Auto Trans.	4.0%	0.4%	3.5%	4.2%	0.4%	3.7%	4.1%	0.4%	3.7%	4.1%	0.4%	3.6%	4.0%	0.4%	3.5%
Lodging	23.8%	37.5%	25.7%	23.1%	35.9%	24.9%	23.3%	36.6%	25.6%	23.4%	35.8%	25.1%	23.1%	36.3%	24.9%
Foodservice	23.6%	22.3%	23.5%	24.7%	22.9%	24.5%	24.5%	22.9%	24.7%	24.3%	23.0%	24.1%	24.4%	23.0%	24.2%
Entertainment & Rec.	12.9%	17.8%	13.6%	13.3%	17.6%	13.9%	13.5%	18.2%	14.4%	13.2%	17.7%	13.9%	13.2%	17.9%	13.9%
General Retail Sales	3.6%	15.8%	5.3%	3.9%	16.8%	5.7%	3.8%	16.7%	5.7%	3.8%	16.7%	5.6%	3.7%	16.2%	5.4%
Travel Planning	13.9%		12.0%	12.1%	0.0%	10.4%	12.2%		10.8%	12.3%		10.6%	12.6%		10.9%
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.*

TRAVEL IMPACT ON MASSACHUSETTS - 2012

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 126,500 jobs, up 1.4 percent from 2011. Employment generated by domestic traveler spending was up 1.8 percent, while employment generated by international traveler spending was down 1.0 percent.

On average, every $140,283 spent by domestic and international travelers in Massachusetts directly supported one job in 2012.

These travel-generated jobs comprised 3.9 percent of total non-agricultural employment in Massachusetts during 2012. Without these jobs generated by travel, Massachusetts's 2012 unemployment rate of 6.7 percent would have been 3.6 percentage points higher, increasing it to 10.4 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 0.8 percent from 2011 to 47,800 jobs. The labor intensiveness of these businesses contributes to the high level of travel employment in this sector.

Travel-Generated Employment in Massachusetts in 2012 by Industry Sector

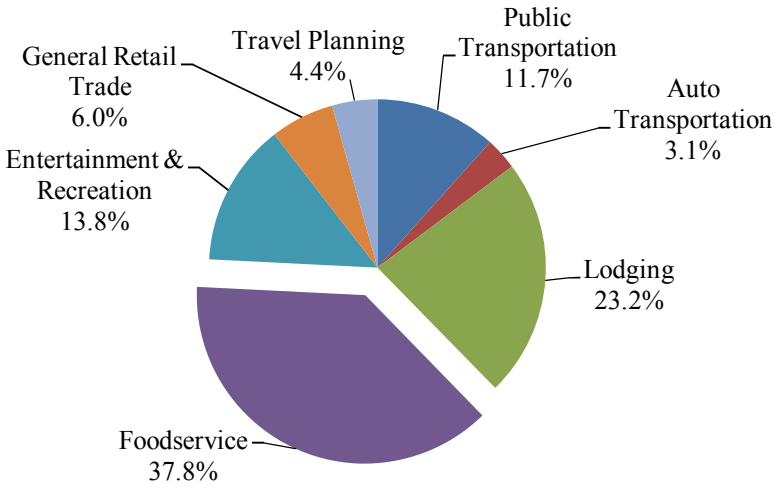


Table 9: Direct Travel-Generated Employment in Massachusetts by Industry Sector, 2011-2012

2012 Employment	Domestic (Thousands)	International (Thousands)	Total (Thousands)	% of Total
Public Transportation	14.0	0.8	14.8	11.7%
Auto Transportation	3.8	0.1	3.9	3.1%
Lodging	24.1	5.3	29.3	23.2%
Foodservice	42.1	5.7	47.8	37.8%
Entertainment & Recreation	14.6	2.9	17.5	13.8%
General Retail Trade	4.6	3.0	7.6	6.0%
Travel Planning *	5.5	0.0	5.5	4.4%
Total	108.8	17.7	126.5	100.0%
2011 Employment				
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%

Percentage change 2012 over 2011	Domestic (%)	International (%)	Total (%)
Public Transportation	2.4%	-3.6%	2.1%
Auto Transportation	1.7%	-3.0%	1.7%
Lodging	2.6%	1.4%	2.4%
Foodservice	1.2%	-2.2%	0.8%
Entertainment & Recreation	2.5%	0.1%	2.1%
General Retail Trade	0.6%	-2.9%	-0.8%
Travel Planning *	1.0%		1.0%
Total	1.8%	-1.0%	1.4%

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.*

Table 10: Direct Travel-Generated Employment in Massachusetts by Industry Sector, 2008-2012
(Employment in thousands)

	2008	2008	2008	2009	2009	2009	2010	2010	2010	2011	2011	2011	2012	2012	2012
Employment	Dom	Int'l	Total	Dom	Int'l	Total	Dom	Int'l	Total	Dom	Int'l	Total	Dom	Int'l	Total
Public Trans.	14.0	0.8	14.8	13.1	0.8	13.8	13.2	0.7	14.0	13.7	0.8	14.5	14.0	0.8	14.8
Auto Trans.	4.0	0.1	4.0	3.8	0.1	3.9	3.7	0.1	3.8	3.8	0.1	3.9	3.8	0.1	3.9
Lodging	25.3	5.5	30.9	23.3	5.2	28.4	23.1	5.1	28.2	23.5	5.2	28.7	24.1	5.3	29.3
Foodservice	41.7	5.6	47.3	40.5	5.5	46.0	40.8	5.5	46.3	41.6	5.9	47.4	42.1	5.7	47.8
Entertainment & Rec.	14.4	2.9	17.3	13.9	2.8	16.6	14.1	2.8	16.9	14.2	2.9	17.1	14.6	2.9	17.5
General Retail Trade	4.7	2.9	7.7	4.6	2.9	7.5	4.5	2.9	7.4	4.6	3.0	7.6	4.6	3.0	7.6
Travel Planning	6.8		6.8	5.3		5.3	5.3		5.3	5.5		5.5	5.5		5.5
Total	110.9	17.8	128.8	104.4	17.2	121.5	104.7	17.0	121.7	106.8	17.9	124.7	108.8	17.7	126.5
% Change*	Dom	Int'l	Total	Dom	Int'l	Total	Dom	Int'l	Total	Dom	Int'l	Total	Dom	Int'l	Total
Public Trans.	-1.1%	12.4%	-0.5%	-7.0%	-5.5%	-7.0%	1.4%	-2.5%	1.2%	3.6%	7.0%	3.8%	2.4%	-3.6%	2.1%
Auto Trans.	-3.0%	9.1%	-2.8%	-2.6%	-1.5%	-2.6%	-3.5%	-0.8%	-3.5%	1.9%	4.2%	1.9%	1.7%	-3.0%	1.7%
Lodging	0.0%	10.9%	1.8%	-8.1%	-6.4%	-7.8%	-0.8%	-1.8%	-1.0%	1.6%	2.4%	1.7%	2.6%	1.4%	2.4%
Foodservice	-0.9%	11.2%	0.4%	-2.8%	-1.8%	-2.7%	0.8%	-0.7%	0.6%	2.0%	7.1%	2.6%	1.2%	-2.2%	0.8%
Entertainment & Rec.	0.3%	8.8%	1.6%	-3.9%	-5.0%	-4.1%	1.8%	1.6%	1.7%	0.8%	3.9%	1.3%	2.5%	0.1%	2.1%
General Retail Trade	-5.8%	10.4%	-0.2%	-3.4%	-1.2%	-2.6%	-0.9%	-1.8%	-1.2%	1.3%	6.8%	3.4%	0.6%	-2.9%	-0.8%
Travel Planning	2.1%		2.1%	-22.4%		-22.4%	0.0%		0.0%	3.7%		3.7%	1.0%		1.0%
Total	-0.7%	10.6%	0.7%	-5.9%	-3.8%	-5.6%	0.4%	-0.9%	0.2%	2.0%	5.1%	2.4%	1.8%	-1.0%	1.4%
% 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%	4.5%	11.5%	12.5%	4.4%	11.4%	12.6%	4.3%	11.5%	12.8%	4.4%	11.6%	12.9%	4.3%	11.7%
Auto Trans.	3.6%	0.4%	3.1%	3.7%	0.4%	3.2%	3.5%	0.4%	3.1%	3.5%	0.4%	3.1%	3.5%	0.4%	3.1%
Lodging	22.8%	31.0%	24.0%	22.3%	30.2%	23.4%	22.0%	29.9%	23.1%	22.0%	29.1%	23.0%	22.1%	29.8%	23.2%
Foodservice	37.6%	31.4%	36.7%	38.8%	32.0%	37.8%	39.0%	32.1%	38.0%	38.9%	32.7%	38.1%	38.7%	32.3%	37.8%
Entertainment & Rec.	13.0%	16.2%	13.4%	13.3%	16.0%	13.7%	13.5%	16.5%	13.9%	13.3%	16.3%	13.7%	13.4%	16.4%	13.8%
General Retail Sales	4.3%	16.5%	6.0%	4.4%	16.9%	6.2%	4.3%	16.8%	6.1%	4.3%	17.0%	6.1%	4.3%	16.7%	6.0%
Travel Planning	6.1%		5.3%	5.0%		4.3%	5.0%		4.3%	5.1%		4.4%	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 - 2012

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 2012, domestic and international traveler spending in Massachusetts generated nearly $2.6 billion in tax revenue for federal, state and local governments, up 4.0 percent from 2011. Domestic traveler spending generated $2.2 billion and international traveler spending generated $357.5 million – up 4.5 percent and 0.9 percent, respectively, from 2011.

Of the total $2.6 billion in tax revenue, the federal government received 57.1 percent or close to $1.5 billion, up 3.7 percent from 2011. Each dollar spent by domestic and international travelers in Massachusetts produced 8.3 cents for federal tax coffers.

Domestic and international traveler spending in Massachusetts also generated $676.4 million in tax revenue for the state treasury through state sales and excise taxes, and taxes on personal and corporate income during 2012, up 3.7 percent from 2011. This $676.4 million comprised 26.3 percent of all travel-generated tax revenue collected in the state. On average, each travel dollar produced 3.8 cents in state tax receipts.

Local governments in Massachusetts directly benefited from travel as well. Travel taxes collected by local governments increased 5.5 percent to $428.3 million in 2012 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 2012 by Level of Government

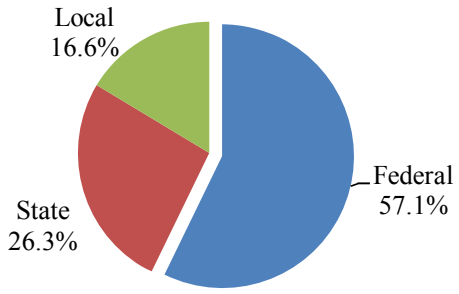


Table 11: Direct Travel-Generated Tax Revenue in Massachusetts by Level of Government, 2011-2012

2012 Tax Revenue	Domestic ($ Millions)	International ($ Millions)	Total ($ Millions)	% of Total
Federal	$1,253.4	$218.4	$1,471.7	57.1%
State	585.9	90.5	676.4	26.3%
Local	379.7	48.6	428.3	16.6%
Total	$2,219.0	$357.5	$2,576.4	100.0%
2011 Tax Revenue				
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%
Percentage change 2012 over 2011	Domestic (%)	International (%)	Total (%)	
Federal	4.3%	0.7%	3.7%	
State	4.2%	0.6%	3.7%	
Local	5.9%	2.2%	5.5%	
Total	4.5%	0.9%	4.0%	

Source: U.S. Travel Association

Table 12: Direct Travel-Generated Tax Revenue in Massachusetts by Level of Government, 2008-2012
(Tax Revenues in millions of dollars)

	2008	2008	2008	2009	2009	2009	2010	2010	2010	2011	2011	2011	2012	2012	2012
Tax Revenue	Dom	Int'l	Total	Dom	Int'l	Total	Dom	Int'l	Total	Dom	Int'l	Total	Dom	Int'l	Total
Federal	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	1,253.4	218.4	1,471.7
State	518.5	79.6	598.1	495.2	78.6	573.8	538.9	83.8	622.7	562.2	90.0	652.2	585.9	90.5	676.4
Local	323.5	41.1	364.6	301.8	39.7	341.5	339.9	43.8	383.6	358.6	47.5	406.1	379.7	48.6	428.3
Total	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	2,219.0	357.5	2,576.4
% Change*	Dom	Int'l	Total	Dom	Int'l	Total	Dom	Int'l	Total	Dom	Int'l	Total	Dom	Int'l	Total
Federal	-0.1%	11.6%	1.5%	-8.7%	-5.5%	-8.2%	5.0%	2.8%	4.6%	4.6%	7.7%	5.1%	4.3%	0.7%	3.7%
State	0.3%	12.0%	1.7%	-4.5%	-1.2%	-4.1%	8.8%	6.6%	8.5%	4.3%	7.4%	4.7%	4.2%	0.6%	3.7%
Local	1.4%	13.2%	2.6%	-6.7%	-3.5%	-6.3%	12.6%	10.3%	12.3%	5.5%	8.6%	5.9%	5.9%	2.2%	5.5%
Total	0.3%	11.9%	1.7%	-7.3%	-4.2%	-6.9%	7.2%	4.7%	6.8%	4.7%	7.7%	5.1%	4.5%	0.9%	4.0%
% of Total	Dom	Int'l	Total	Dom	Int'l	Total	Dom	Int'l	Total	Dom	Int'l	Total	Dom	Int'l	Total
Federal	58.7%	63.2%	59.4%	57.9%	62.4%	58.5%	56.7%	61.2%	57.3%	56.6%	61.2%	57.3%	56.5%	61.1%	57.1%
State	25.4%	24.3%	25.2%	26.2%	25.0%	26.0%	26.6%	25.5%	26.4%	26.5%	25.4%	26.3%	26.4%	25.3%	26.3%
Local	15.9%	12.5%	15.4%	16.0%	12.6%	15.5%	16.8%	13.3%	16.3%	16.9%	13.4%	16.4%	17.1%	13.6%	16.6%
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 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 2008 to 2012. Table 14 shows the comparison of expenditure, earnings, and employment multipliers for the same period.

In 2012, the $17.7 billion spent directly by domestic and international travelers in Massachusetts generated $28.2 billion in total output, up 4.7 percent from 2011. 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 $3.7 billion in payroll income generated by direct travel spending, $3.4 billion in earnings was produced by secondary impact in 2012. The ratio of total earnings generated to the initial spending is 0.40, the earnings multiplier.

In addition, travel in Massachusetts directly and indirectly supported a total of 204,500 jobs in 2012. The ratio of total employment generated to initial spending is 12, 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 2012.

Table 13: Multiplier Impact of Traveler Spending in Massachusetts, 2008-2012

Year	Impact Measure	Direct Impact	Indirect & Induced Impact	Total Impact
2012	Expenditures (millions)	$17,739.6	$10,465.3	$28,204.9
	Earnings (millions)	$3,742.0	$3,423.2	$7,165.2
	Employment (thousands)	126.5	78.0	204.5
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

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

Table 14: Multipliers of Travel in Massachusetts, 2008-2012

Multipliers	2008	2009	2010	2011	2012
Output Multiplier	1.58	1.60	1.59	1.59	1.59
Earning Multiplier	0.45	0.45	0.43	0.41	0.40
Employment Multiplier	13.7	13.9	12.7	11.9	11.53

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

DOMESTIC TRAVEL IMPACT ON MASSACHUSETTS COUNTIES - 2012

During 2012, domestic travelers spent $15.4 billion while traveling in Massachusetts, up 5.4 percent from 2011. These expenditures directly generated $3.2 billion in payroll income and 108,800 jobs for Massachusetts' residents. Tax revenue generated by this spending amounted to $585.9 million for the state government and $379.7 million for local governments.

Travel expenditures occurred throughout all fourteen counties in Massachusetts. The top five counties in Massachusetts received close to $12.4 billion in direct domestic traveler expenditures and accounted for 80.2 percent of the state total. Additionally, travel directly generated $2.6 billion in payroll income (80.9 percent) in the top five counties, as well as 86,800 jobs (79.8 percent) in 2012. Domestic traveler expenditures in the top five counties also generated $437.1 million in tax revenue for the state treasury and $292.2 million tax revenue for local governments in 2012. The top five counties in Massachusetts contributed 75.6 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 2012. Direct domestic travel expenditures in Suffolk County totaled $7.4 billion, accounting for 48.3 percent of the state total, up 6.6 percent from 2011. These expenditures generated close to $1.4 billion in payroll income and 42,700 jobs for the county residents, up 4.1 percent and 2.9 percent, respectively, from 2011.

Middlesex County ranked second with nearly $2.3 billion in domestic travel spending in 2012, up 4.5 percent from 2011. These expenditures represented a 14.7 percent share of the state total. Payroll income and jobs directly attributable to domestic travel spending totaled $579.5 million and 19,800 jobs.

Norfolk County received $972.3 million from domestic travelers, 6.3 percent of the state total and up 5.4 percent from 2011. These travel expenditures benefited the county with $277.3 million in payroll income and 9,500 jobs.

In fourth place, Barnstable County posted $902.6 million in domestic expenditures, 5.9 percent of the state total. The expenditures generated $226.7 million in payroll income as well as 8,600 jobs within the county.

Essex County ranked fifth with $780.5 million in domestic travel spending in 2012, a 3.7 percent increase from 2011. Domestic traveler spending in Essex County generated $170.5 million in payroll income and 6,200 jobs during 2012.

Table 15: Domestic Travel Impact in Massachusetts - Top 5 Counties, 2011-2012

2012 Impact

County	Expenditures ($ Millions)	Payroll ($ Millions)	Employment (Thousands)	State Tax Receipts ($ Millions)	Local Tax Receipts ($ Millions)
Suffolk	$7,442.9	$1,354.3	42.7	$189.3	$136.5
Middlesex	2,258.1	579.5	19.8	121.1	60.4
Norfolk	972.3	277.3	9.5	49.6	21.1
Barnstable	902.6	226.7	8.6	37.7	54.0
Essex	780.5	170.5	6.2	39.8	20.2
Five County Total	$12,356.4	$2,608.4	86.8	$437.6	$292.2
State Totals	$15,405.8	$3,225.7	108.8	$585.9	$379.7
Share of Top 5 Counties	80.2%	80.9%	79.8%	74.7%	77.0%

2011 Impact

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
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%

Percent Change 2012 over 2011

Suffolk	6.6%	4.1%	2.9%	6.0%	7.5%
Middlesex	4.5%	5.0%	1.7%	4.6%	5.9%
Norfolk	5.4%	3.4%	1.7%	4.2%	6.5%
Barnstable	6.0%	4.2%	2.1%	5.0%	4.9%
Essex	3.7%	1.5%	0.4%	2.7%	4.5%
Five County Total	5.9%	4.1%	2.2%	5.0%	6.4%
State Total	5.4%	3.6%	1.8%	4.2%	5.9%

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 2011 and 2012 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 2012 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 2012 travel expenditures from highest to lowest
Table C	Percent distribution for each impact measure in 2012
Table D	Percent change in 2012 over 2011 estimates for each of the measures of economic impact.
Table E	Counties listed alphabetically, with 2011 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 2008 to 2012
Table G	Domestic travel-generated payroll and percentage change over previous year by county from 2008 to 2012
Table H	Domestic travel-generated employment and percentage change over previous year by county from 2008 to 2012
Table I	Domestic travel-generated tax revenue and percentage change over previous year by county for state government from 2008 to 2012
Table J	Domestic travel-generated tax revenue and percentage change over previous year by county for local government from 2008 to 2012

2012 Domestic Travel Impact on Massachusetts

Table A: Alphabetical by County, Preliminary 2012

County	Expenditures ($ Millions)	Payroll ($ Millions)	Employment (Thousands)	State Tax Receipts ($ Millions)	Local Tax Receipts ($ Millions)
Barnstable	$902.58	$226.73	8.61	$37.72	$54.01
Berkshire	355.13	86.06	3.39	17.22	10.20
Bristol	447.65	86.97	3.01	22.53	8.54
Dukes	127.98	30.78	1.20	4.77	7.26
Essex	780.45	170.50	6.23	39.79	20.17
Franklin	57.81	9.91	0.36	3.03	1.82
Hampden	484.29	101.89	3.17	25.72	9.67
Hampshire	119.84	24.67	0.86	6.19	3.19
Middlesex	2,258.11	579.52	19.81	121.06	60.43
Nantucket	152.63	31.24	1.01	4.45	5.33
Norfolk	972.32	277.31	9.47	49.65	21.13
Plymouth	532.97	100.79	3.65	25.03	24.23
Suffolk	7,442.94	1,354.31	42.69	189.34	136.50
Worcester	771.12	145.00	5.30	39.37	17.22
Statewide	**$15,405.84**	**$3,225.69**	**108.75**	**$585.89**	**$379.72**

2012 Domestic Travel Impact on Massachusetts
Table B: Ranking of Counties by Expenditure Levels, Preliminary 2012

County	Expenditures ($ Millions)	Payroll ($ Millions)	Employment (Thousands)	State Tax Receipts ($ Millions)	Local Tax Receipts ($ Millions)
Suffolk	$7,442.94	$1,354.31	42.69	$189.34	$136.50
Middlesex	2,258.11	579.52	19.81	121.06	60.43
Norfolk	972.32	277.31	9.47	49.65	21.13
Barnstable	902.58	226.73	8.61	37.72	54.01
Essex	780.45	170.50	6.23	39.79	20.17
Worcester	771.12	145.00	5.30	39.37	17.22
Plymouth	532.97	100.79	3.65	25.03	24.23
Hampden	484.29	101.89	3.17	25.72	9.67
Bristol	447.65	86.97	3.01	22.53	8.54
Berkshire	355.13	86.06	3.39	17.22	10.20
Nantucket	152.63	31.24	1.01	4.45	5.33
Dukes	127.98	30.78	1.20	4.77	7.26
Hampshire	119.84	24.67	0.86	6.19	3.19
Franklin	57.81	9.91	0.36	3.03	1.82
Statewide	**$15,405.84**	**$3,225.69**	**108.75**	**$585.89**	**$379.72**

2012 Domestic Travel Impact on Massachusetts
Table C: Percent Distribution by County, Preliminary 2012

County	Expenditures	Payroll	Employment	State Tax	Local Tax
Barnstable	5.86%	7.03%	7.91%	6.44%	14.22%
Berkshire	2.31%	2.67%	3.12%	2.94%	2.69%
Bristol	2.91%	2.70%	2.77%	3.85%	2.25%
Dukes	0.83%	0.95%	1.11%	0.81%	1.91%
Essex	5.07%	5.29%	5.73%	6.79%	5.31%
Franklin	0.38%	0.31%	0.33%	0.52%	0.48%
Hampden	3.14%	3.16%	2.91%	4.39%	2.55%
Hampshire	0.78%	0.76%	0.79%	1.06%	0.84%
Middlesex	14.66%	17.97%	18.22%	20.66%	15.92%
Nantucket	0.99%	0.97%	0.93%	0.76%	1.40%
Norfolk	6.31%	8.60%	8.70%	8.47%	5.56%
Plymouth	3.46%	3.12%	3.36%	4.27%	6.38%
Suffolk	48.31%	41.99%	39.25%	32.32%	35.95%
Worcester	5.01%	4.50%	4.87%	6.72%	4.54%
Statewide	**100.00%**	**100.00%**	**100.00%**	**100.00%**	**100.00%**

2012 Domestic Travel Impact on Massachusetts
Table D: Percent Change over 2011

County	Expenditures	Payroll	Employment	State Tax	Local Tax
Barnstable	5.96%	4.20%	2.12%	4.97%	4.90%
Berkshire	2.70%	-0.55%	-2.00%	0.54%	4.54%
Bristol	6.28%	3.89%	1.98%	4.26%	5.81%
Dukes	4.64%	3.24%	1.72%	4.01%	4.27%
Essex	3.69%	1.46%	0.36%	2.66%	4.54%
Franklin	3.24%	1.44%	-0.09%	1.55%	3.38%
Hampden	0.26%	0.24%	-1.29%	-0.89%	1.84%
Hampshire	7.90%	5.85%	3.64%	6.49%	6.49%
Middlesex	4.48%	4.99%	1.72%	4.63%	5.90%
Nantucket	3.32%	3.06%	1.95%	3.64%	2.28%
Norfolk	5.41%	3.35%	1.67%	4.23%	6.53%
Plymouth	3.65%	3.02%	1.50%	2.76%	4.48%
Suffolk	6.65%	4.11%	2.92%	5.96%	7.45%
Worcester	2.64%	0.71%	-0.52%	1.62%	4.68%
Statewide	**5.38%**	**3.60%**	**1.82%**	**4.21%**	**5.88%**

2011 Domestic Travel Impact on Massachusetts
Table E: Alphabetical by County, 2011

County	Expenditures ($ Millions)	Payroll ($ Millions)	Employment (Thousands)	State Tax Receipts ($ Millions)	Local Tax Receipts ($ Millions)
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**

Table F: Domestic Travel Expenditures by County, 2008-2012

Expenditures (in $ millions)

County	2008	2009	2010	2011	2012
Barnstable	$847.4	$785.2	$812.7	$851.8	$902.6
Berkshire	337.2	309.0	327.3	345.8	355.1
Bristol	384.8	361.5	384.4	421.2	447.7
Dukes	113.2	104.8	112.3	122.3	128.0
Essex	675.7	634.9	690.8	752.7	780.5
Franklin	51.5	47.3	50.7	56.0	57.8
Hampden	436.6	419.5	442.9	483.0	484.3
Hampshire	102.8	96.2	102.4	111.1	119.8
Middlesex	2,013.3	1,856.8	2,004.0	2,161.2	2,258.1
Nantucket	162.4	136.8	140.5	147.7	152.6
Norfolk	828.6	791.6	838.1	922.5	972.3
Plymouth	477.4	446.5	475.0	514.2	533.0
Suffolk	6,419.8	5,781.2	6,408.0	6,979.1	7,442.9
Worcester	688.9	647.9	686.0	751.3	771.1
State Totals	**$13,539.5**	**$12,419.2**	**$13,475.0**	**$14,619.8**	**$15,405.8**

Percentage Change Over Previous Year

County	2008/2007	2009/2008	2010/2009	2011/2010	2012/2011
Barnstable	3.6%	-7.3%	3.5%	4.8%	6.0%
Berkshire	0.4%	-8.4%	5.9%	5.7%	2.7%
Bristol	3.1%	-6.1%	6.3%	9.6%	6.3%
Dukes	0.3%	-7.4%	7.1%	8.9%	4.6%
Essex	2.4%	-6.0%	8.8%	9.0%	3.7%
Franklin	6.5%	-8.2%	7.3%	10.4%	3.2%
Hampden	2.3%	-3.9%	5.6%	9.1%	0.3%
Hampshire	0.3%	-6.4%	6.5%	8.4%	7.9%
Middlesex	1.8%	-7.8%	7.9%	7.8%	4.5%
Nantucket	-1.5%	-15.7%	2.6%	5.2%	3.3%
Norfolk	1.0%	-4.5%	5.9%	10.1%	5.4%
Plymouth	-0.1%	-6.5%	6.4%	8.3%	3.7%
Suffolk	1.0%	-9.9%	10.8%	8.9%	6.6%
Worcester	2.5%	-6.0%	5.9%	9.5%	2.6%
State Totals	**1.4%**	**-8.3%**	**8.5%**	**8.5%**	**5.4%**

Table G: Domestic Travel-Generated Payroll by County, 2008-2012

Payroll (in $ millions)

County	2008	2009	2010	2011	2012
Barnstable	$227.0	$212.5	$213.6	$217.6	$226.7
Berkshire	91.7	84.9	84.9	86.5	86.1
Bristol	83.7	79.4	82.2	83.7	87.0
Dukes	28.2	27.8	28.4	29.8	30.8
Essex	165.4	157.0	162.4	168.0	170.5
Franklin	9.7	9.5	9.7	9.8	9.9
Hampden	95.7	92.9	98.0	101.6	101.9
Hampshire	23.8	22.5	22.8	23.3	24.7
Middlesex	558.6	520.5	530.3	552.0	579.5
Nantucket	32.3	29.5	29.6	30.3	31.2
Norfolk	265.9	256.7	257.6	268.3	277.3
Plymouth	101.1	95.6	96.0	97.8	100.8
Suffolk	1,326.6	1,207.0	1,238.0	1,300.9	1,354.3
Worcester	140.8	133.8	139.1	144.0	145.0
State Totals	**$3,150.6**	**$2,929.5**	**$2,992.6**	**$3,113.7**	**$3,225.7**

Percentage Change Over Previous Year

County	2008/2007	2009/2008	2010/2009	2011/2010	2012/2011
Barnstable	4.1%	-6.4%	0.5%	1.9%	4.2%
Berkshire	2.2%	-7.4%	0.1%	1.9%	-0.5%
Bristol	2.4%	-5.1%	3.5%	1.8%	3.9%
Dukes	0.9%	-1.6%	2.4%	4.8%	3.2%
Essex	2.2%	-5.1%	3.5%	3.5%	1.5%
Franklin	7.4%	-1.4%	1.7%	0.8%	1.4%
Hampden	0.6%	-2.9%	5.4%	3.8%	0.2%
Hampshire	-0.4%	-5.5%	1.3%	2.4%	5.9%
Middlesex	2.9%	-6.8%	1.9%	4.1%	5.0%
Nantucket	-4.4%	-8.7%	0.2%	2.4%	3.1%
Norfolk	0.8%	-3.5%	0.4%	4.2%	3.4%
Plymouth	-0.7%	-5.5%	0.4%	2.0%	3.0%
Suffolk	-1.7%	-9.0%	2.6%	5.1%	4.1%
Worcester	2.2%	-5.0%	3.9%	3.5%	0.7%
State Totals	**0.4%**	**-7.0%**	**2.2%**	**4.0%**	**3.6%**

Table H: Domestic Travel-Generated Employment by County, 2008-2012

Employment (in thousands)

County	2008	2009	2010	2011	2012
Barnstable	9.0	8.5	8.4	8.4	8.6
Berkshire	3.7	3.5	3.5	3.5	3.4
Bristol	3.0	2.9	2.9	2.9	3.0
Dukes	1.1	1.1	1.2	1.2	1.2
Essex	6.3	6.0	6.1	6.2	6.2
Franklin	0.4	0.4	0.4	0.4	0.4
Hampden	3.2	3.2	3.1	3.2	3.2
Hampshire	0.9	0.8	0.8	0.8	0.9
Middlesex	20.4	19.2	19.2	19.5	19.8
Nantucket	1.1	1.0	1.0	1.0	1.0
Norfolk	9.3	9.1	9.0	9.3	9.5
Plymouth	3.8	3.6	3.6	3.6	3.6
Suffolk	43.3	39.8	40.3	41.5	42.7
Worcester	5.4	5.2	5.2	5.3	5.3
State Totals	**110.9**	**104.4**	**104.7**	**106.8**	**108.8**

Percentage Change Over Previous Year

County	2008/2007	2009/2008	2010/2009	2011/2010	2012/2011
Barnstable	0.9%	-5.4%	-1.3%	0.0%	2.1%
Berkshire	-0.1%	-6.4%	-1.2%	0.3%	-2.0%
Bristol	-0.7%	-4.1%	1.0%	0.2%	2.0%
Dukes	-0.7%	0.2%	1.8%	2.3%	1.7%
Essex	-0.3%	-4.0%	1.6%	1.8%	0.4%
Franklin	1.9%	-6.2%	1.5%	0.1%	-0.1%
Hampden	-1.8%	-1.9%	-0.9%	2.2%	-1.3%
Hampshire	-3.2%	-4.4%	-0.1%	0.4%	3.6%
Middlesex	-0.3%	-5.8%	0.2%	1.2%	1.7%
Nantucket	-4.5%	-7.0%	-0.6%	0.6%	2.0%
Norfolk	-1.5%	-2.4%	-0.4%	3.2%	1.7%
Plymouth	-1.1%	-4.5%	-0.9%	0.5%	1.5%
Suffolk	-0.9%	-8.0%	1.1%	3.0%	2.9%
Worcester	-1.0%	-4.0%	0.4%	1.6%	-0.5%
State Totals	**-0.7%**	**-5.9%**	**0.4%**	**2.0%**	**1.8%**

Table I: Domestic Travel-Generated Tax Revenue for Massachusetts State Government by County, 2008-2012

Tax Revenue for State Government (in $ millions)

County	2008	2009	2010	2011	2012
Barnstable	$34.6	$33.2	$34.7	$35.9	$37.7
Berkshire	16.4	15.5	16.6	17.1	17.2
Bristol	19.9	19.4	20.8	21.6	22.5
Dukes	4.2	4.0	4.3	4.6	4.8
Essex	35.0	34.0	37.3	38.8	39.8
Franklin	2.8	2.7	2.9	3.0	3.0
Hampden	23.4	23.2	24.7	25.9	25.7
Hampshire	5.4	5.2	5.6	5.8	6.2
Middlesex	107.0	102.1	111.1	115.7	121.1
Nantucket	4.6	4.0	4.1	4.3	4.5
Norfolk	43.0	42.5	45.4	47.6	49.6
Plymouth	22.6	21.9	23.5	24.4	25.0
Suffolk	163.9	152.7	170.7	178.7	189.3
Worcester	35.8	34.8	37.2	38.7	39.4
State Totals	**$518.5**	**$495.2**	**$538.9**	**$562.2**	**$585.9**

Percentage Change Over Previous Year

County	2008/2007	2009/2008	2010/2009	2011/2010	2012/2011
Barnstable	2.3%	-4.1%	4.4%	3.7%	5.0%
Berkshire	-0.9%	-5.2%	6.8%	3.4%	0.5%
Bristol	1.7%	-2.8%	7.2%	4.0%	4.3%
Dukes	-1.0%	-4.2%	8.1%	5.5%	4.0%
Essex	1.1%	-2.8%	9.7%	3.8%	2.7%
Franklin	5.1%	-5.0%	8.3%	2.6%	1.5%
Hampden	1.0%	-0.6%	6.5%	4.9%	-0.9%
Hampshire	-1.0%	-3.2%	7.4%	3.7%	6.5%
Middlesex	0.6%	-4.6%	8.9%	4.2%	4.6%
Nantucket	-2.8%	-12.8%	3.5%	4.0%	3.6%
Norfolk	-0.3%	-1.2%	6.8%	4.9%	4.2%
Plymouth	-1.4%	-3.2%	7.3%	3.7%	2.8%
Suffolk	-0.3%	-6.8%	11.8%	4.7%	6.0%
Worcester	1.2%	-2.7%	6.8%	4.3%	1.6%
State Totals	**0.3%**	**-4.5%**	**8.8%**	**4.3%**	**4.2%**

Table J: Domestic Travel-Generated Tax Revenue for Local Governments in Massachusetts by County, 2008-2012

Tax Revenue for Local Governments (in $ millions)

County	2008	2009	2010	2011	2012
Barnstable	$48.4	$45.5	$49.2	$51.5	$54.0
Berkshire	8.9	8.3	9.2	9.8	10.2
Bristol	7.2	6.8	7.6	8.1	8.5
Dukes	6.3	5.9	6.6	7.0	7.3
Essex	16.9	16.1	18.3	19.3	20.2
Franklin	1.6	1.5	1.7	1.8	1.8
Hampden	8.2	8.0	8.9	9.5	9.7
Hampshire	2.7	2.5	2.8	3.0	3.2
Middlesex	51.2	47.9	54.0	57.1	60.4
Nantucket	5.4	4.6	4.9	5.2	5.3
Norfolk	17.3	16.8	18.6	19.8	21.1
Plymouth	20.9	19.9	22.1	23.2	24.2
Suffolk	113.7	103.9	120.4	127.0	136.5
Worcester	14.7	14.0	15.5	16.5	17.2
State Totals	**$323.5**	**$301.8**	**$339.9**	**$358.6**	**$379.7**

Percentage Change Over Previous Year

County	2008/2007	2009/2008	2010/2009	2011/2010	2012/2011
Barnstable	3.4%	-6.0%	8.2%	4.6%	4.9%
Berkshire	0.2%	-7.0%	10.7%	6.4%	4.5%
Bristol	2.8%	-4.7%	11.1%	6.2%	5.8%
Dukes	0.1%	-6.0%	12.0%	4.8%	4.3%
Essex	2.1%	-4.7%	13.7%	5.5%	4.5%
Franklin	6.3%	-6.8%	12.2%	4.7%	3.4%
Hampden	2.1%	-2.5%	10.3%	7.1%	1.8%
Hampshire	0.1%	-5.1%	11.3%	5.8%	6.5%
Middlesex	1.6%	-6.4%	12.8%	5.6%	5.9%
Nantucket	-1.7%	-14.5%	7.3%	5.7%	2.3%
Norfolk	0.8%	-3.1%	10.7%	6.6%	6.5%
Plymouth	-0.3%	-5.1%	11.2%	5.0%	4.5%
Suffolk	0.8%	-8.6%	15.9%	5.5%	7.5%
Worcester	2.3%	-4.6%	10.7%	6.1%	4.7%
State Totals	**1.4%**	**-6.7%**	**12.6%**	**5.5%**	**5.9%**

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 = ∑ Travel Spending in category *i , i=1,2,3…..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 REALTED 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 Approch, 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 he 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.