

TOURISM ECONOMICS

The Impact of the BP Oil
Spill on Visitor Spending
in Louisiana:

Revised estimates based on
data through 2010 Q4

Prepared for the Louisiana Office of
Tourism

June 2011



Overview

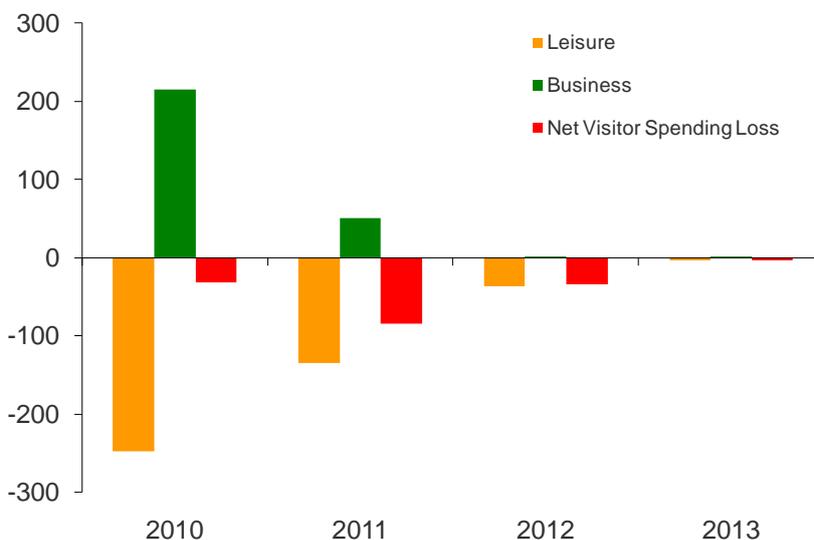
Tourism to Louisiana was unambiguously affected by the oil spill resulting from the explosion of the Deepwater Horizon oil rig in April, 2010. The threats from the oil spill, both real and perceived, to the gulf shoreline, waters, and seafood have impacted Louisiana tourism. This report updates the analysis released in December 2010 to include data collected through the fourth quarter of 2010.

Summary results

- Through the end of 2010, lost visitor spending was an estimated \$32 million, 0.4% below the baseline forecast
- Leisure visitor spending in 2010 realized losses of \$247 million which were offset by an increase in business spending related to the oil spill of \$216 million
- Peak losses are expected in 2011 as leisure visitation is expected to recover relatively slower with offsets from business spending dissipating more quickly
- Lost visitor spending is expected to total \$153 million through 2013, a decrease of 0.4% from the baseline forecast over the 2010-2013 period
- Leisure visitor spending is expected to forfeit 1.7% (\$422 million) over this period
- However, this is offset by an increase of 2.7% (\$269 million) in business visitor spending resulting from activity related to the oil spill and cleanup
- The effects on visitor spending are expected to persist into 2013 before returning to the baseline forecast

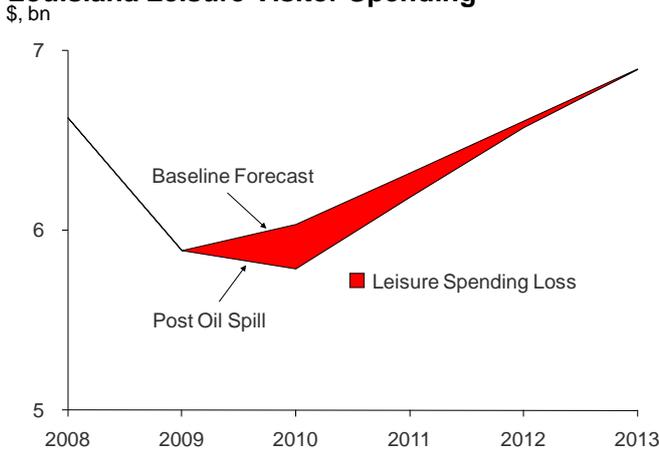
Louisiana Visitor Spending Loss

\$ million, relative to baseline forecast



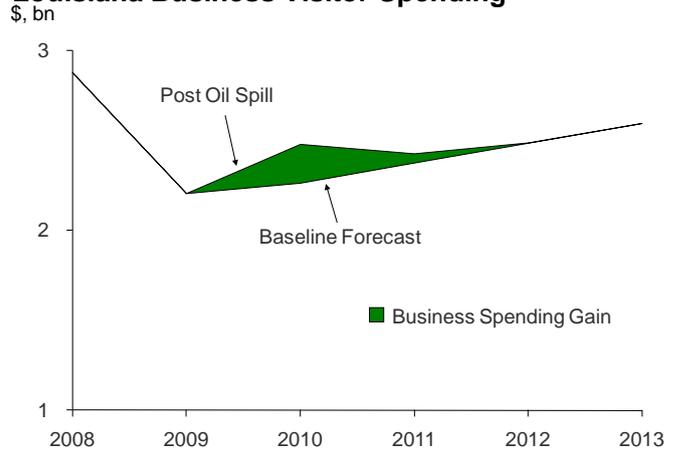
Source : Tourism Economics/Louisiana Office of Tourism

Louisiana Leisure Visitor Spending



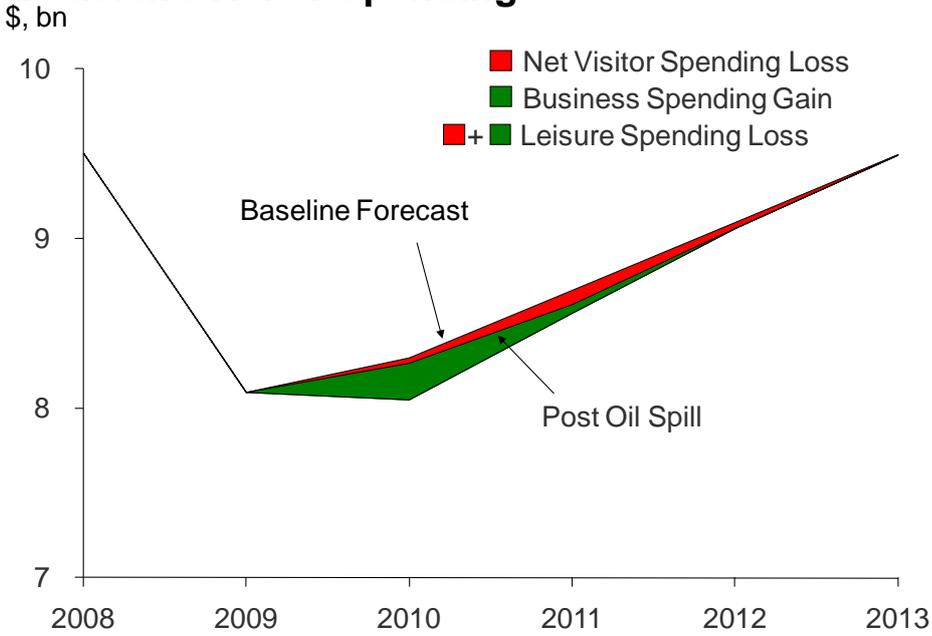
Source : Tourism Economics/Louisiana Office of Tourism

Louisiana Business Visitor Spending



Source : Tourism Economics/Louisiana Office of Tourism

Louisiana Visitor Spending



Source : Tourism Economics/Louisiana Office of Tourism

The Impact of the BP Oil Spill on Visitor Spending in Louisiana

Louisiana Visitors Oil Spill Impact, million				
	2010	2011	2012	2013
Baseline Forecast	24.2	24.7	25.3	25.7
Business	6.3	6.4	6.6	6.7
Leisure	17.9	18.3	18.7	19.0
Post Oil Spill	24.1	24.6	25.3	25.7
Business	6.8	6.5	6.6	6.7
Leisure	17.2	18.1	18.7	19.0
Lost Leisure Visitors	-0.7	-0.2	0.0	0.0
% of Baseline Forecast	-2.8%	-0.6%	-0.1%	0.0%
Offsetting Business Visitors	0.5	0.1	0.0	0.0
% of Baseline Forecast	2.2%	0.3%	0.0%	0.0%
Net Visitor Loss	-0.1	-0.1	0.0	0.0
% of Baseline Forecast	-0.6%	-0.3%	-0.1%	0.0%
Cumulative Visitors Lost	-0.1	-0.2	-0.2	-0.2
% of Baseline Forecast	-0.6%	-0.4%	-0.3%	-0.2%

Louisiana Visitor Expenditure Oil Spill Impact, \$ million				
	2010	2011	2012	2013
Baseline Forecast	8,300.0	8,698.0	9,097.9	9,498.2
Business	2,263.7	2,375.9	2,485.7	2,595.7
Leisure	6,036.3	6,322.2	6,612.2	6,902.4
Post Oil Spill	8,268.4	8,614.1	9,063.4	9,494.9
Business	2,479.5	2,427.1	2,487.6	2,595.8
Leisure	5,788.9	6,187.0	6,575.8	6,899.1
Lost Leisure Spending	-247.4	-135.1	-36.4	-3.4
% of Baseline Forecast	-3.0%	-1.6%	-0.4%	0.0%
Offsetting Business Spending	215.8	51.2	1.9	0.1
% of Baseline Forecast	2.6%	0.6%	0.0%	0.0%
Lost Visitor Spending	-31.5	-83.9	-34.5	-3.3
% of Baseline Forecast	-0.4%	-1.0%	-0.4%	0.0%
Cumulative Lost Revenue	-31.5	-115.5	-150.0	-153.3
% of Baseline Forecast	-0.4%	-0.7%	-0.6%	-0.4%

Oil Spill Impacts on Visitor Spending

Just prior to the explosion of the Deepwater Horizon oil rig, the “Louisiana Tourism Forecast: 2009-2013” was published by the University of New Orleans Hospitality Research Center and Louisiana State University Division of Economic Development on behalf of the Louisiana Department of Culture, Recreation and Tourism. This forecast provides our analysis with a useful baseline against which to assess the impacts of the oil spill on tourism spending. That is, the baseline forecast provides us with a model of what would have been absent the oil spill.

Our analysis quantifies the initial impacts on tourism volumes and spending using available data for the period since the explosion of the Deepwater Horizon. We then model continuing effects on visitor volume using inputs from surveys of visitor perception and intentions to travel to Louisiana collected after the oil spill as well as the baseline forecast. The visitor spending impact is then the resulting difference between the baseline spending forecast and the post oil spill spending forecast until the two forecasts converge.

While the model as presented above is conceptually simple, travelers are not a homogenous group. Therefore, differences in types of travelers must be considered. The model estimates the impacts on business and leisure visitors separately. Leisure visitors are more likely to be negatively affected by the oil spill. The most obvious segment affected would be the 10% of Louisiana visitors in 2009 reporting trip activities including outdoor recreation/fishing and usage of beaches.

Another important factor is seasonality. We developed our model on a quarterly basis to account for the differing levels of tourism activity during the year and to more accurately account for changing perception over time. Given an impact in absolute terms, the relative effect of that impact will differ depending on the timing of the impact within the year. Historically, the peak travel season in Louisiana has been the 1st and 2nd quarters, with the peak typically in the 2nd quarter. A detailed description of the methodology used to develop the quarterly model appears in the final section of this report.

Observed Impact

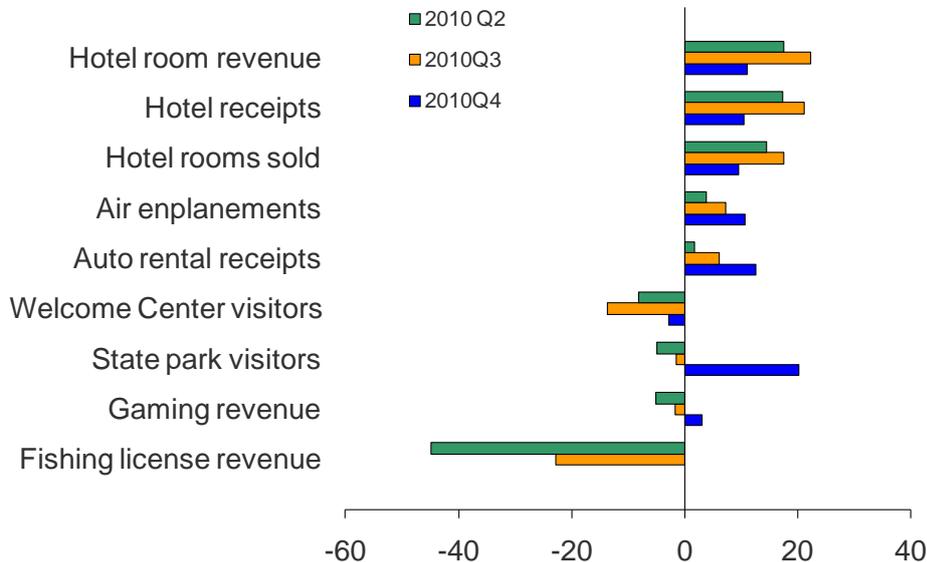
Our period of analysis begins in the second quarter of 2010, the quarter in which the explosion of the Deepwater Horizon occurred. Data were compiled from a number of sources to estimate the initial impact on tourism. These data include industry data covering

- hotel performance;
- air enplanements at Louisiana airports;
- gross receipts for hotels;
- gross receipts for car rental companies;
- gaming revenue from the Louisiana Department of Revenue;
- fishing licenses sold and revenue from the Louisiana Department of Wildlife and Fisheries;

- Louisiana Welcome Center visitors from the Louisiana Office of Tourism; and
- National survey results of prospective visitors.

Louisiana Tourism Indicators

% change year ago



Source : STR, Louisiana Office of Tourism, Louisiana Department of Revenue, Louisiana Department of Wildlife & Fisheries

There are two competing dynamics apparent in the data, in general. Hotels have fared pretty well since the beginning of this crisis. The number of hotel rooms sold in the second through fourth quarters of 2010 was up nearly 14% over the same period of 2009. However, fewer visitors passed through Louisiana welcome centers and visits to state parks also declined in the second and third quarters while the fourth quarter did show a rebound in state park visitors. The increase in hotel room demand can be partially explained by an increase in business travel (with the other part being an increase in the average length of stay). This is expected in the current context given the presence of activity related to the oil spill and cleanup efforts. Additionally, there appears to be a small recovery of some of the leisure visitors lost in the second and third quarters in the fourth quarter as some of those who postponed trips due to the spill initiated travel in the fourth quarter.

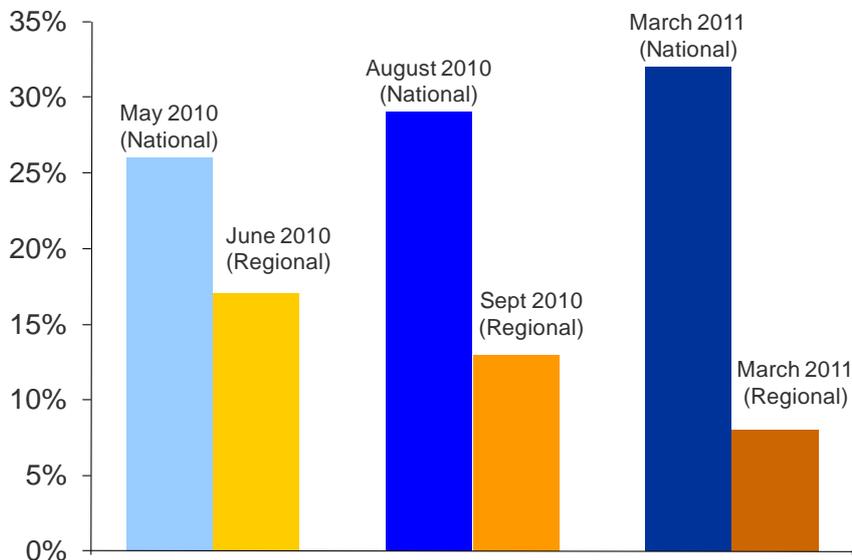
MDRG has conducted multiple surveys of leisure travelers on behalf of the Louisiana Office of Tourism. The national surveys, conducted in May and August of 2010 and March of 2011, and regional surveys, conducted in June and September of 2010 and March of 2011, identify those leisure travelers who had plans to visit Louisiana and cancelled their plans after the oil spill.

Visitors in the national survey were more likely to have cancelled or postponed trips after the oil spill. In May 2010, 26% of respondents who had planned trips to Louisiana prior to the oil spill had either cancelled or postponed their trips after the oil spill. This number increased to 32% in the

most recent survey. Regional travelers had cancelled or postponed only 17% of planned trips to Louisiana in June 2010, but that number had improved to 13% by September 2010 and further to 8% by March of 2011.

Cancelled/postponed trips after oil spill

% of respondents with plans to visit Louisiana prior to oil spill



Source : MDRG/Louisiana Office of Tourism

Based on the available data, we estimate that visitation to Louisiana declined 1% in the 2nd quarter of 2010. Business travel increased 17.6% over 2009Q2 while leisure travel decreased 7.6%. In the 3rd quarter, total visits increased by 3.3% over 2009Q3 led by business visits (14.2%) while leisure visits declined 0.5%.

Visits grew a modest 0.3% in 2010Q4, with business visits slowing to 5.9%, while leisure visits declined 1.7%. Total visits in 2010 Q2-Q4 were 0.8% below the baseline forecast. Leisure visits were 5.0% lower than the baseline and offset by an increase in business visits of 11.3% above the baseline forecast.

To arrive at the spending level of the initial impact we adjusted per visitor spending (by purpose of trip) based on the baseline forecast using data available for 2010Q2-Q4. On a per trip basis, spending per visit increased modestly in each quarter from the prior year. This was driven both by increases in room rates and general price inflation overall as well as an increase in the average length of stay. Both prices and length of stay were driven heavily by the business segment.

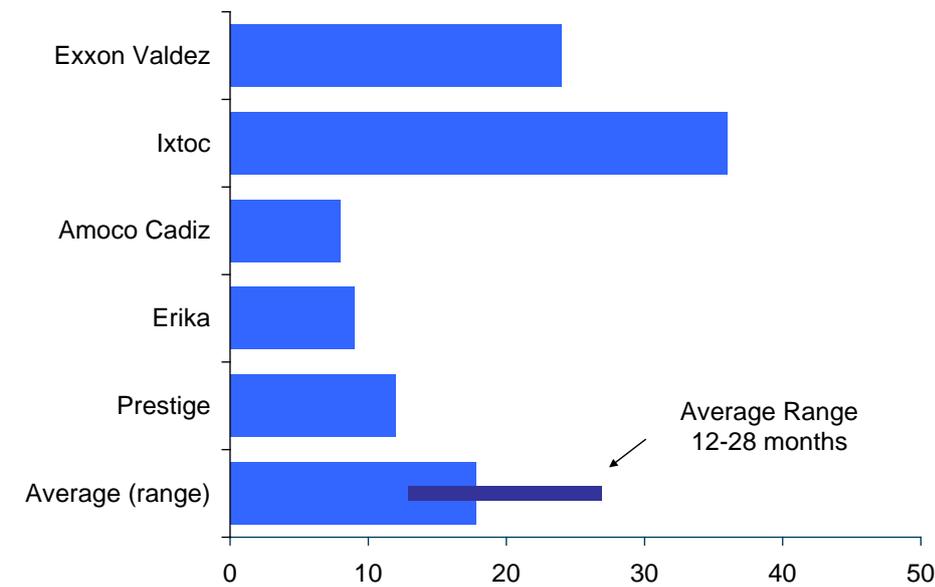
Multiplying per visitor spending by the number of visitors provides us with visitor spending by purpose of trip. Our results show business travelers spent \$1.9 billion in 2010Q2-Q4, representing an increase of 12.7% relative to the baseline forecast. Leisure travel spending tallied \$4.3 billion, 5.4% below the baseline forecast. In total, visitor spending was \$6.2 billion in 2010 Q2-Q4. Lost visitor spending is calculated at \$32 million, 0.5% below the baseline forecast in the 2nd through 4th quarters.

Continuing effects from visitor perceptions

The effects on visitation to, and visitor spending in, Louisiana are expected to persist for some time. Research conducted by Tourism Economics on behalf of the US Travel Association analyzed the impact of previous oil spills on tourism spending for affected destinations. The average range of impact duration for the five prior spills analyzed was between 12 and 28 months, with the Ixtoc spill impacts lasting 36 months.

Duration of Oil Spill Tourism Impacts

Months after initial disruption for visitor spending to return to baseline



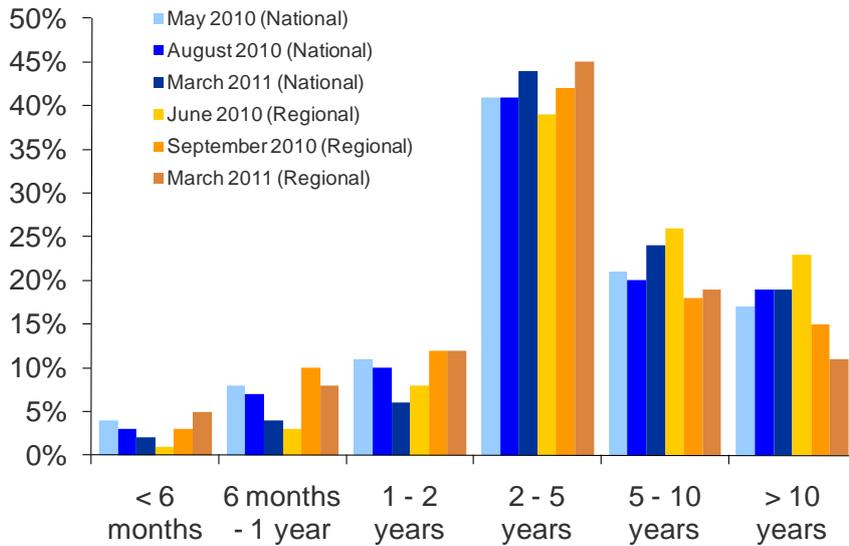
Source : Tourism Economics

Further evidence of lingering effects is suggested in survey results of leisure travelers, both national and regional, conducted for the Louisiana Office of Tourism by MDRG. These surveys were conducted in waves following the onset of the crisis. Not only do these surveys suggest that visitors had already cancelled or postponed planned trips to Louisiana in the following 12 months, they also show that perceptions regarding the recovery of Louisiana's tourism product would be long lived. The most recent surveys, conducted in March 2011, do show some minor shifts in the expected duration of impacts on Louisiana. Among national respondents, 87% believed the oil spill would affect Louisiana for 2 or more years, up from 80% in the August 2010 survey. Regional survey respondents have a more tempered outlook with only 75% of respondents expecting the effects to last beyond two years.

Our model uses this distribution of perceptions as a starting point for estimating the recovery rate of leisure visitation over time. Looking at the chart, it is apparent that visitor perceptions initially recover slowly. Perceptions then rapidly improve after year two and then slow again as time progresses. If one were to plot this over time, one would expect to see

Perception of Effect on Louisiana

% of respondents

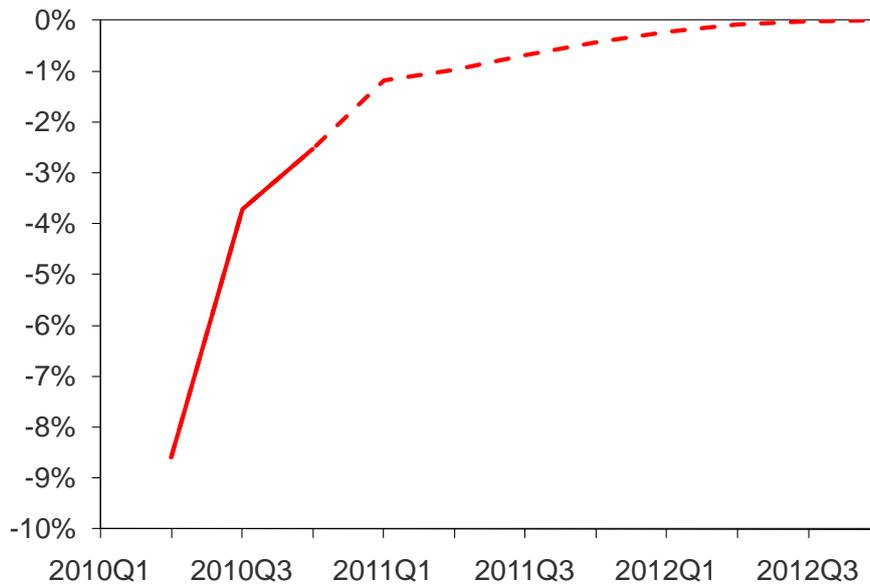


Source : MDRG/Louisiana Office of Tourism

a classic power- or S-curve. However, the effects on travel to Louisiana are not likely to be as long lived as suggested by the survey results. Thus, while our model exhibits the S-curve shape implied by the survey results, the duration of effects is shortened by applying the S-curve methodology only on the outstanding balance of “lost” visitors from the previous quarter as opposed to the initial impacts.

Leisure Visitor Impact

% relative to baseline forecast



Source : Tourism Economics

To explain this more intuitively – once a visitor is “recovered” their perception of the destination is assumed to remain positive. Conversely, the “gained” business travel is expected to wane in a similar pattern.

However, we expect that shape of the S-curve will be steeper. That is, the offsetting business travel related to the oil spill will decline at a faster rate than the recovery of leisure travelers. The model implies that visitor volumes should return to the baseline forecast in 2012 Q4.

Effects on visitor spending

Along with the decrease in visitor volume resulting from the disaster, per visitor spending was also assessed. Since the beginning of the spill, prices have pushed higher than suggested by the forecast. This is largely due to the increase in business travel and the resulting increase in hotel demand and occupancy rates. As the offsets from business travel in response to the spill begin to wane, occupancy rates will begin to decline. In the face of decreased demand, purveyors of travel services are likely to lower prices to attract visitors. Thus, visitors can consume the same amount of services for an otherwise lower amount. This downward pressure on prices in the near term will delay the return of spending relative to visitor volume. In addition, MDRG surveys indicate that visitors from nearby markets are less hindered than those from further away—who tend to stay longer and consequently spend more per visit. Our model indicates that visitor spending will return the baseline by 2013 Q2, although the losses in spending in 2013 Q1 are expected to be only marginal. This would put the duration of effects on visitor spending at approximately 36 months.

Methodological notes

Seasonality is an important factor in determining the effects of a shock on tourism activity. To address seasonality, we use a quarterly model as the basis of our analysis. The baseline forecast, however, is an annual model which needed to be converted to a quarterly basis. Historical visitor volumes were seasonalized based on a weighted average of visitation by quarter from TNS data for Louisiana and STR data on room nights sold. A two year moving average was then used to seasonalize the forecast periods. Visitor spending was seasonalized using the US Travel Association's Travel Price Index.

Additionally, the baseline forecast was only available on an aggregated basis, i.e. total visits and total visitor spending. Thus, TNS data (from which the baseline forecast was partially derived) was used to disaggregate business and leisure visitation and spending.

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