

# THE RETURN ON INVESTMENT *of* U.S. BUSINESS TRAVEL

PREPARED BY OXFORD ECONOMICS USA



**U.S. TRAVEL**  
ASSOCIATION

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# Executive Summary

Business travel is under scrutiny. Corporations, responding to weakening profits, have targeted travel as an immediate candidate for cost savings. In addition, meetings and incentive travel have been recently maligned in public forums as excessive. Perhaps more than at any other time in recent history, business travel is being evaluated from all sides.

To be useful, this evaluation should center on a fundamental business question: what is the relationship of business travel to company performance? Of course business travel generates significant economic value through its direct injections into the transport, hospitality, and other service sectors. This is not to be ignored. But the real value of business travel relates to its impact on individual company performance and, by extension, the performance of the U.S. economy. This study seeks to define exactly this.

The approach is based on a combination of two separate surveys of corporate executives and business travelers, a review of related research, and an econometric analysis of the effects of business travel on corporate performance. The results of this collective analysis show a robust and irrefutable relationship between a company's investment in business travel—including internal meetings, trade shows, conferences, incentives, and sales—and its profitability.

## Key Research Findings

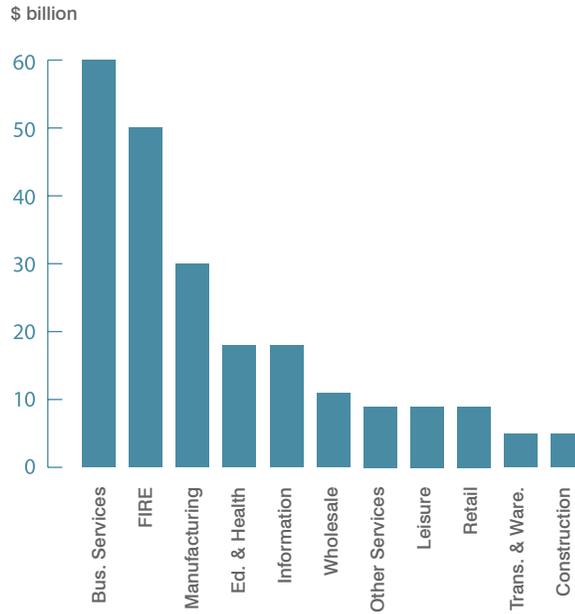
- Econometric analysis and surveyed executives confirmed a similar magnitude of business travel ROI: for every dollar invested in business travel companies realize \$12.50 in incremental revenue.
- Curbing business travel can reduce a company's profits for years. The average business in the U.S. would forfeit 17% of its profits in the first year of eliminating business travel. It would take more than three years for profits to recover.
- Both executives and business travelers estimate that 28% of current business would be lost without in-person meetings
- Both executives and business travelers estimate that roughly 40% of their prospective customers are converted to new customers with an in-person meeting compared to 16% without such a meeting.
- More than half of business travelers stated that 5-20% of their company's new customers were the result of trade show participation.
- Executives stated that in order to achieve the same effect of incentive travel, an employee's total base compensation would need to be increased by 8.5%.
- An increase in government travel spending of \$1 million will increase government worker productivity and therefore output by between \$4.6 million and \$6.3 million.

### What is at issue?

U.S. companies spent \$229 billion on business travel in 2008<sup>1</sup>. Over 90%, or \$206 billion, was spent on travel within the United States. This represents slightly less than 1% of the average company’s revenue and about 2% of U.S. companies’ expenses not including labor or capital.

In terms of absolute expenditures, the top business travel spenders are: business services (\$60 bn); finance, insurance, and real estate (FIRE) (\$48 bn); manufacturing (\$31 bn); and education and health care (\$18 bn).<sup>2</sup>

### Business travel expenditures by sector, 2008



Source: Oxford Economics, BEA, U.S. Travel Association

### Companies are limiting travel...

As corporate profits have fallen over the past year, companies have reacted with an array of cost-cutting measures related to travel. According to a February 2009 survey of 400 corporate executives:<sup>3</sup>

- 51% majority report that their organization has decreased the amount of business travel in recent months.
- Those who have made cuts have reduced their budgets by an average 35%.

### ...presenting business implications

For each type of business travel, corporate executives and travelers confirmed a wide range of benefits realized by their companies. The benefits can be organized into four categories: keeping customers, converting prospects, building relational networks, and investing in people.

The table below identifies the intersection of each of seven types of business travel with their respective primary benefits.

Business Travel Return on Investment Matrix					
		TRIP BENEFIT			
		Keeping Customers	Converting Prospects	Relational Networking	Investing in People
TRIP TYPE	Customer visits	+			
	Sales and marketing	+	+		
	Internal meetings				+
	Employee training				+
	Conferences, conventions	+	+	+	+
	Trade shows, exhibitions	+	+	+	+
	Incentive and reward				+

<sup>1</sup> Source: Oxford Economics, U.S. Travel Association, and BEA. For reference, U.S. Travel Association analysis indicates that \$246 billion was spent in the U.S. economy including U.S. private sector and government spending, as well as international inbound business travel. Oxford Economics analysis includes only private sector business travel in the U.S. and abroad.

<sup>2</sup> Source: Oxford Economics analysis of BEA supply-use tables

<sup>3</sup> Source: Kellogg School of Management

### Business implication #1: Keeping customers

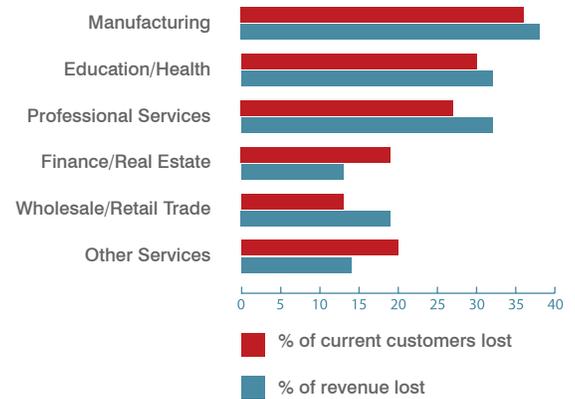
More than 75% of customers either require or prefer in-person meetings, according to business travelers surveyed in April 2009. And an overwhelming majority of corporate executives (81%) believe a slow economy calls for more contact with clients, not less.<sup>4</sup>

Clearly, cutting back on business travel poses significant business risks. According to business travelers across all industries, 25% of existing customers and 28% of revenue could be lost to competitors if customers were not met in-person. This risk appears to be most acute within the manufacturing sector, where 36% of customers and 38% of revenue could be lost to competitors.

These losses do not relate only to client-specific travel. One-third of business travelers indicated external conferences to have a significant impact on customer retention.

Corporate executives confirmed what business travelers asserted: 28% of their business would be lost without in-person meetings.

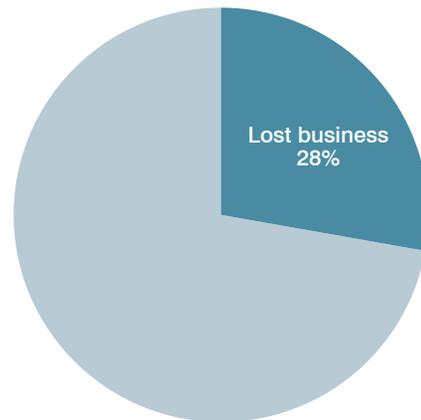
### Potential loss of current customers and revenue from not meeting in-person



Source: Survey of business travelers (n=500)

### Percent of existing customers that would be lost without in-person meetings

weighted average of responses



Source: Corporate executives survey (n=300)

<sup>4</sup> Source: Kellogg School of Management

## Business implication #2: Converting prospects

Travel and sales are inextricably linked. Prospects are more than twice as likely to become new customers with an in-person meeting. Separate surveys asked the same question of corporate executives and rank-and-file business travelers and the results were nearly identical.

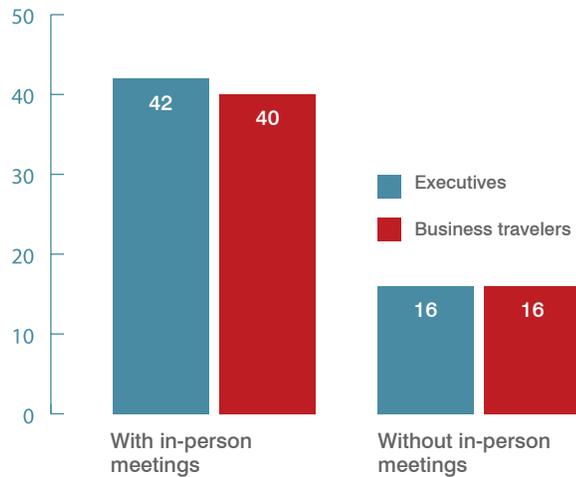
Both executives and business travelers estimate that roughly 40% of their prospective customers are converted to new customers with an in-person meeting compared to 16% without such a meeting.

From a competitive standpoint, this has significant implications. Three-quarters of businesses believe that increasing travel, while competitors are reducing it, can build market share and customer relationships. Half (53%) say reducing business travel will give their competition an advantage.<sup>5</sup>

The relationship between business sales and trade show participation is particularly strong. More than half of business travelers stated that 5-20% of their company's new customers were the result of trade show participation.

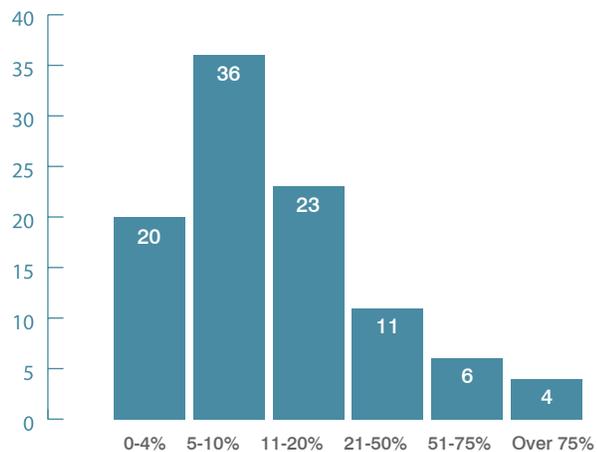
### Conversion rate of prospects to customers with and without in-person meeting

% (weighted average of responses)



Source: Survey of business travelers (n=500) and executives (n=300)

### Percent of new customers gained from participation in trade shows



Source: Survey of business travelers (n=500)

<sup>5</sup> Source: Kellogg School of Management

### Business implication #3: Building relationships

Cooperative relationships are integral to company performance. And both executives and travelers confirm travel to be a catalyst to the development of relationships on every level. For example, networking with vendors (48%) and prospects (43%) were among the top cited purposes of attending trade shows.

Internal company meetings also offer a range of benefits to company performance. Corporate executives most frequently cited idea sharing, better communication, and staff morale as a significant impact of internal meetings.

### Business implication #4: Investing in human capital

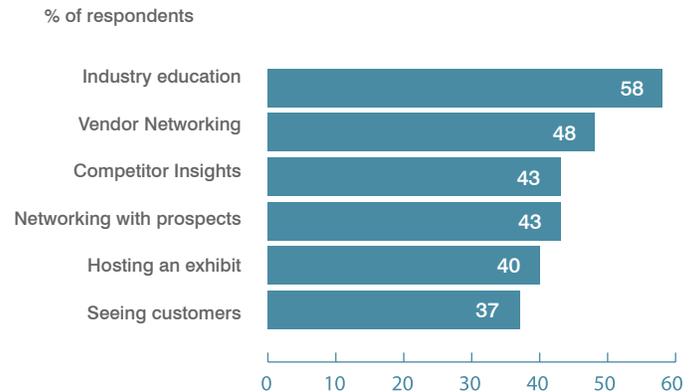
Business executives and travelers also affirmed a strong relationship between travel and employee performance and satisfaction.

The majority of business travelers identified internal company travel as key to professional development (66%), job performance (58%), and morale (56%). And more than 40% of travelers perceive a strong relationship between travel and staff retention.

Corporate executives confirm the connection between travel employee performance and morale. Internal meetings receive the highest marks with 73% of executives indicating a significant impact on employee performance and 66% confirming the importance of travel to employee morale.

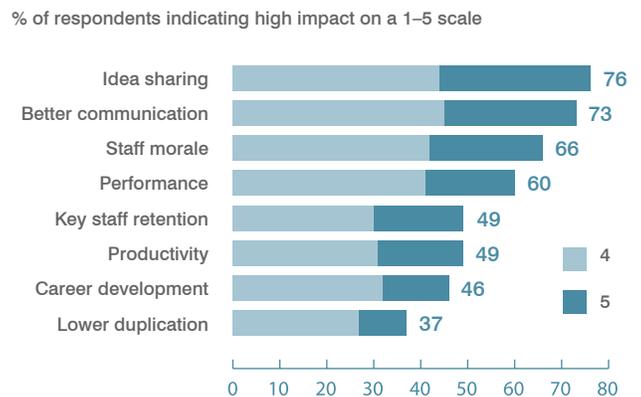
And nearly 80% of executives indicate that incentive travel has a significant impact on employee morale and job satisfaction. More than 70% believe that incentive travel has a real impact on employee performance.

### Purpose of attending external trade show



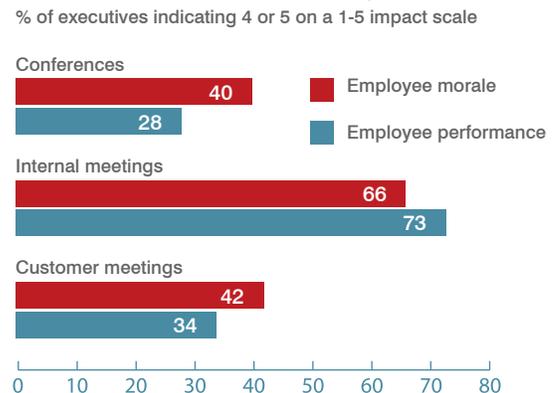
Sources: Survey of business travelers (n=500)

### Impact of travel for internal company meeting



Sources: Corporate executives survey (n=300)

### Benefits of travel to employees



Sources: Corporate executives survey (n=300)

**The ultimate implication: What does travel mean for the bottom line?**

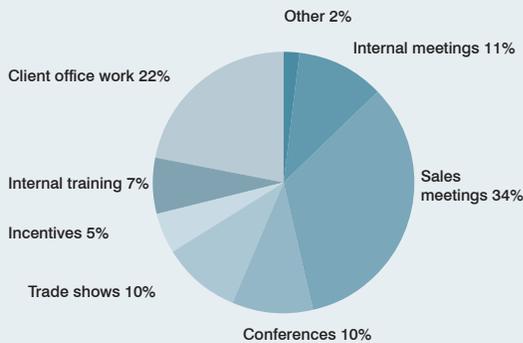
Given the central importance of this question to corporate strategy, two independent analyses were conducted to quantify the return on investment of business travel. We first sought the answer directly from corporate executives. We then developed an econometric model to assess the relationships between business travel spending and company performance.

Executives indicated that the average return of business travel on revenue was between \$10 and \$14.99 per dollar invested across four types of trips.

Not surprisingly, customer meetings were cited as having the greatest returns, in the range of \$15-\$19.99 per dollar invested. Executives indicated returns for conferences and trade shows in the range of \$4-\$5.99 for each dollar spent. Incentive travel investments yield an ROI of more than \$4:\$1.

**Corporate Executives: ROI of Business Travel**

**Business Travel Spend**  
% of total travel budget



**Total sales return for each dollar of investment on travel**  
Median of responses

**\$10 – 14.99**

Trip type	% of travel budget Average	Return on \$1 of investment Median of responses
Customer meetings	34%	\$15 –19.99
Conferences	10%	\$4–5.99
Trade shows	10%	\$4–5.99
Incentives	5%	\$4+
All other	42%	NA

To test the perspectives given by corporate executives, a parallel econometric analysis was conducted to assess the overall impact of business travel on financial performance. The advantage to this approach is that it captures both direct and indirect benefits of business travel and is rooted in industry data covering a longer period of time. A model was developed to quantify the impact of travel spending on productivity and, by extension, on sales and profits using a combination of time series and cross-sectional panel econometrics.

The econometric model confirmed a similar magnitude of impact as indicated by the executive survey: for every dollar invested in business travel, U.S. companies have experienced a return of approximately \$12.50 in revenue and \$3.80 in profits. These results encompass all types of business travel and yield a slightly broader range.

The model found the effects of business travel on corporate performance to be realized in the medium term, with the majority of the impact realized over approximately 3 years.

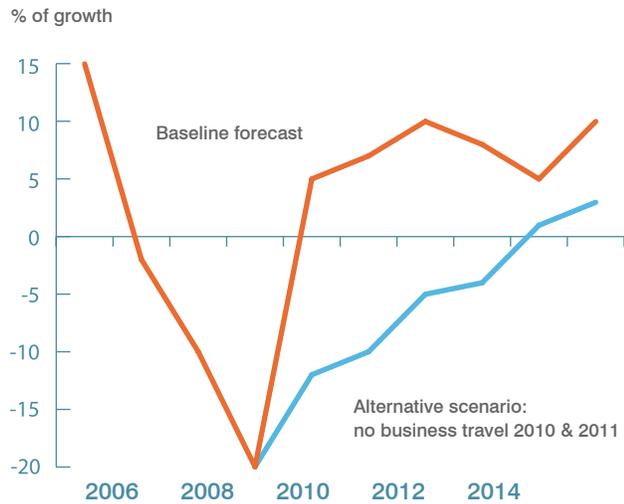
### Econometric Analysis: ROI of Business Travel Impact of \$1 mn increase in spending

	Minimum	Maximum	ROI (midpoint)
<b>Revenue</b>	<b>\$8.5 mn</b>	<b>\$16.4 mn</b>	<b>12.5</b>
<b>Profits (without wage increase)</b>	<b>\$7.5 mn</b>	<b>\$15.4 mn</b>	<b>11.5</b>
<b>Profits (with wage increase)</b>	<b>\$2.5 mn</b>	<b>\$5.1 mn</b>	<b>3.8</b>

The analysis was then extended to estimate the impact on corporate performance if a company eliminated business travel for two years (2010 and 2011). The adjacent chart shows the declines in profits which would be realized by an average U.S. company. In the first year of a complete shut-down of travel, the company experiences a profit decline of 12% instead of a 5% increase. The negative impact on profits peaks in the year after the two-year travel hiatus. It then takes several years after travel is reinstated for profits to stabilize.

This has critical implications for business leaders facing decisions about their investment in business travel. As with any cost, there are likely savings to be realized through more careful allocations of business travel. However, the evidence points to substantial risks associated with cutbacks in this particular area. And companies that continue to invest in travel, experience returns that more than warrant the investment.

### US Profits: alternative scenarios



Source: Oxford Economics

# 1. Business Travel and Economic Cycles

As corporate profits have fallen over the past year, companies have reacted with an array of cost-cutting measures related to travel.

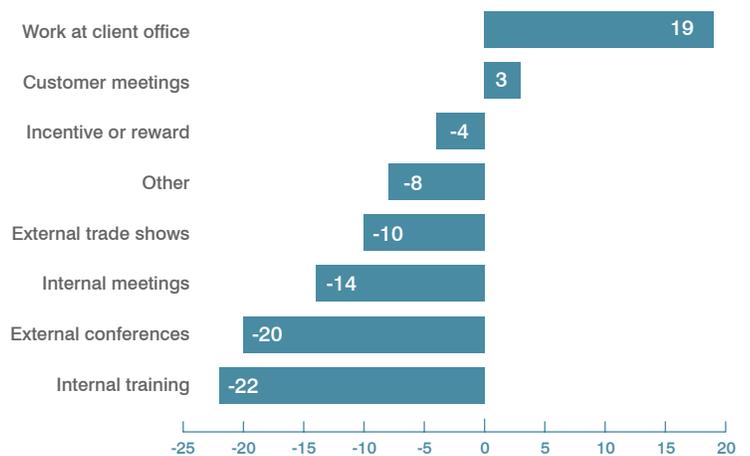
According to a February 2009 survey of 400 corporate executives:<sup>6</sup>

- 51% majority report that their organization has either significantly (17%) or somewhat (34%) decreased the amount of business travel in recent months.
- Those who have made cuts have reduced their travel budgets by an average 35%.
- However, 34% have slashed their travel budgets by more than half.

According to our April 2009 survey of 500 business travelers, the contraction is expected to continue across nearly all types of business trips. When asked if they expect to take more, fewer, or the same amount of a given type of trip in the coming year, the responses tilted strongly toward fewer for all travel except customer-focused trips.

- Internal training (-22% balance) and external conferences (-20% balance) are expected to decline by the greatest proportion of business travelers.
- Work at client offices (+19% balance) and customer meetings (+3% balance) are expected to hold up amidst the recession.

Changes in trips over next 12 months



Source: Survey of business travelers (n=500)

<sup>6</sup> Source: Kellogg School of Management

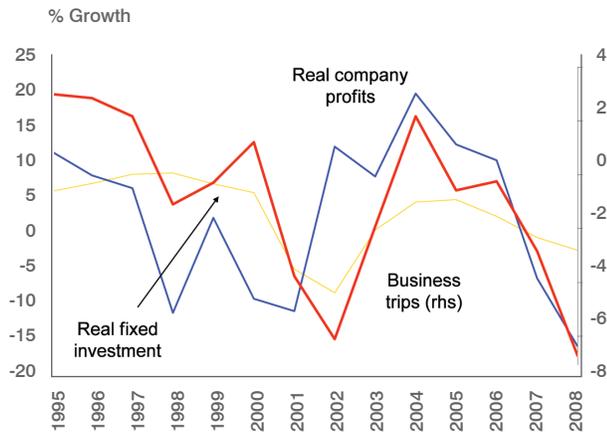
Business executives confirm this cost cutting strategy. According to an American Express survey of CFOs in May 2009, a large majority (87%) stated that their companies plan to spend less on business travel this year with 44% expecting a cut of more than 10%.<sup>7</sup>

These trends are not entirely surprising. Historically, businesses cut back on travel in the same way as on capital investments during a downturn. In both the 2001/2002 recession and the recession which began in 2008, business travel fell in tandem with corporate profits, following the same pattern as investment. This would seem to indicate that travel is perceived to be similar to a capital investment in that it is expected to yield benefits to corporate productivity. This is indeed the case as our research will show.

Yet the parallel relationship between business profits and travel also indicates that businesses believe travel to be a reasonable place to cut expenses—at least temporarily. Indeed three-quarters (72%) of business travel decision makers believe reduced travel is necessary during an economic downturn.<sup>8</sup>

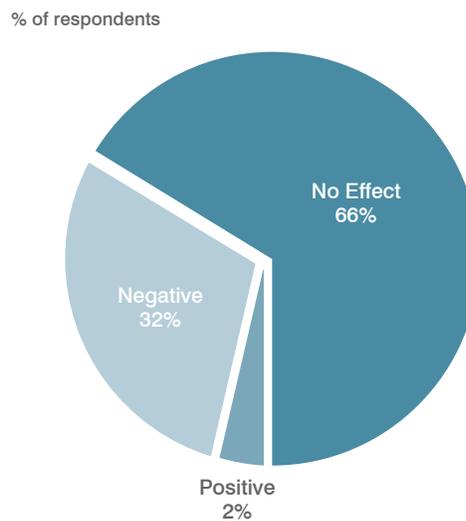
But businesses are split as to whether travel should be the first place to cut costs – 43% feel that travel budgets should be reduced first while 56% do not. One-third of businesses that have decreased travel in recent months (32%) think these travel reductions will have a negative effect on their relationships and sales. And 40% of companies with a negative forecast say cuts in travel will have a detrimental bottom line effect.

### Business trips, investment and profits



Source: Tourism Economics, U.S. Travel Association, BEA

### Effects of Reduction in Travel



Source: Kellogg School of Management

<sup>7</sup> The second annual American Express/CFO Research Global Business & Spending Monitor quizzed 285 senior financial executives in the U.S., Europe, Canada, Asia and Australia.

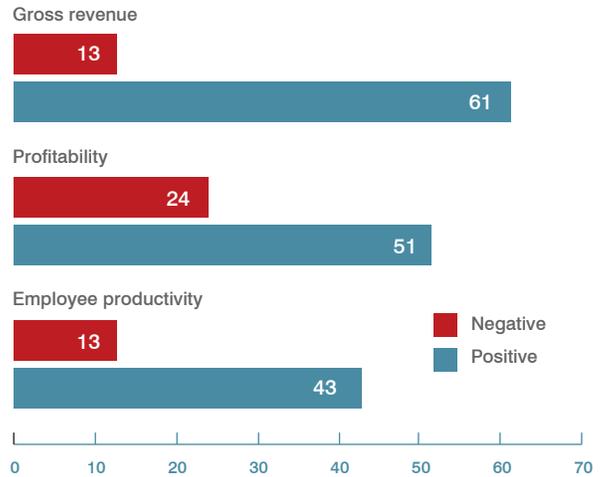
<sup>8</sup> Kellogg School of Management

On the positive side, a majority of corporate executives (61%) believes that an increase in travel budgets would have a positive impact on revenue. Twice as many executives stated that greater travel would have a positive effect on profitability (51%) as those who thought it would lower profitability (24%).

This brings a foundational question to the forefront: what is the bottom line impact of business travel on corporate performance? That is, should changes in business travel be looked at not only as a cost to be managed, but also as a driver of corporate profits? The following section assesses each of the commercial benefits of business travel through the eyes of corporate executives and business travelers. After this, we present a quantitative analysis of the overall impact of business travel on corporate performance in America.

### Impact of additional travel spending

% of Responses



Source: Corporate executives survey (n=300)

## 2. What do companies invest in business travel?

U.S. companies spent \$229 billion on business travel in 2008<sup>9</sup>. More than 90%, or \$206 billion, was spent on travel within the United States. This figure is consistent with the Bureau of Economic Analysis Travel and Tourism Satellite Account (TTSA) as well as independent Oxford Economics and U.S. Travel Association analysis.

This represents slightly less than 1% of the average company's revenue. Information, professional services, and leisure & hospitality sectors spend disproportionately more on travel as a share of revenue. Still, no sector spends more than 3% of its revenue on travel. To put this figure into further context, \$229 billion represents about 2% of U.S. companies' expenses not including labor or capital.

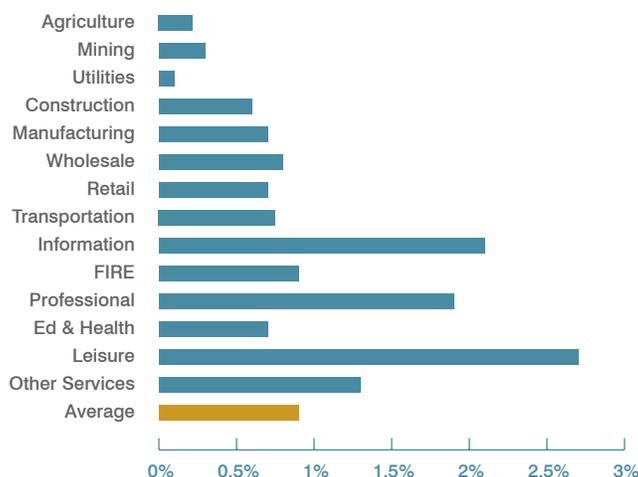
In terms of absolute expenditures, the top business travel spenders are: business services (\$60 bn); finance, insurance, and real estate (FIRE) (\$48 bn); manufacturing (\$31 bn); and education and health care (\$18 bn).<sup>10</sup>

<sup>9</sup> Source: Oxford Economics, U.S. Travel Association, and BEA. For reference, U.S. Travel Association analysis indicates \$246 billion was spent in the U.S. economy including private sector and government, as well as international inbound business travel. Oxford Economics analysis includes only private sector business travel in the U.S. and abroad.

<sup>10</sup> Source: Oxford Economics analysis of BEA supply-use tables

### Business travel intensity

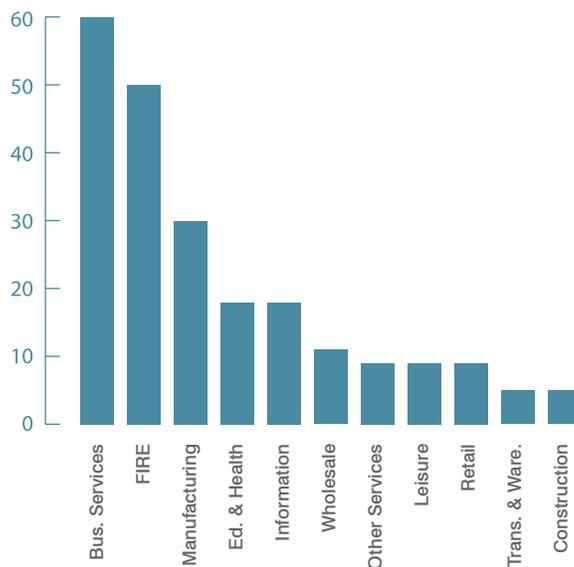
Business travel spending as a share of industry revenue



Source: Oxford Economics

### Business travel expenditures by sector, 2008

\$ billion

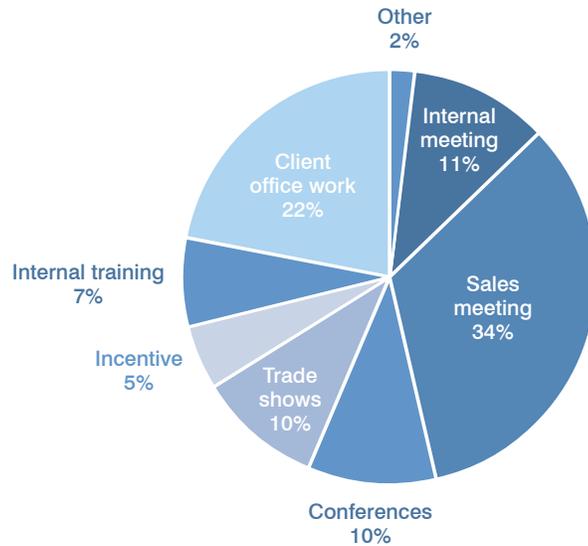


Source: Oxford Economics, BEA, U.S. Travel Association

Based on our May 2009 survey of 300 corporate executives, sales-related meetings comprise about one-third (34%) of business travel expenditures. Work at client offices follows with 22%. Internal meetings, conferences, and trade shows each represent about 10% of the average corporation's travel budget.

### Business travel spend by type of trip

% of total travel budget



Source: Corporate executives survey (n=300), Oxford Economics

### 3. Defining the Benefits of Business Travel

Business travel is an essential business function which produces a broad range of benefits to both companies and individuals. This rather obvious claim is supported by 82% of executives who believe travel is important for business results.<sup>11</sup> To understand the parameters of these benefits better, we have focused this analysis on seven distinct types of business travel. For each of these business travel types, corporate executives and travelers were asked about the related benefits realized by their companies. The benefits can be organized into four categories: keeping customers, converting prospects, building relational networks, and investing in people.

The table below identifies the intersection of each of the seven types of business travel with their respective primary benefits.

This provides a framework for the surveys and analysis which follow. The following sections portray benefits of business travel within each benefit category as understood by corporate executives and business travelers themselves. Once these parameters of corporate perceptions have been established, the analysis moves to a quantitative assessment of the effects of business travel on corporate performance.

Business Travel Return on Investment Matrix				
TRIP BENEFIT				
	Keeping Customers	Converting Prospects	Relational Networking	Investing in People
TRIP TYPE	Customer visits	+		
Sales and marketing	+	+		
Internal meetings				+
Employee training				+
Conferences, conventions	+	+	+	+
Trade shows, exhibitions	+	+	+	+
Incentive and reward				+

<sup>11</sup> Source: Kellogg School of Management

### 3.1. Keeping customers

Maintaining strong customer relationships is perhaps the most fundamental purpose of business travel. More than 75% of customers either require or prefer in-person meetings according to business travelers surveyed in April 2009.

And an overwhelming majority of corporate executives (81%) believe a slow economy calls for more contact with clients, not less.<sup>12</sup>

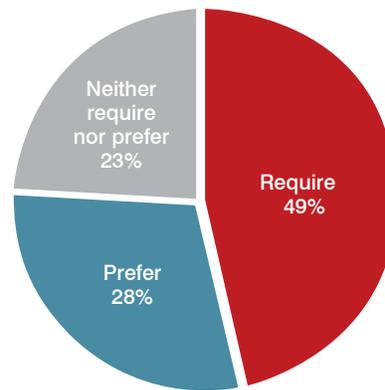
Clearly, cutting back on business travel poses significant business risks. According to business travelers across all industries, 25% of existing customers and 28% of revenue could be lost to competitors if customers were not met in-person. This risk appears to be most acute within the manufacturing sector, where 36% of customers and 38% of revenue could be lost to competitors.

For most industries, relatively larger customers (in terms of revenue) would likely be lost if they were not met in-person.

This concern was confirmed among corporate executives who believe their competitors will gain an advantage by keeping an active travel schedule while their travel decreases.<sup>13</sup>

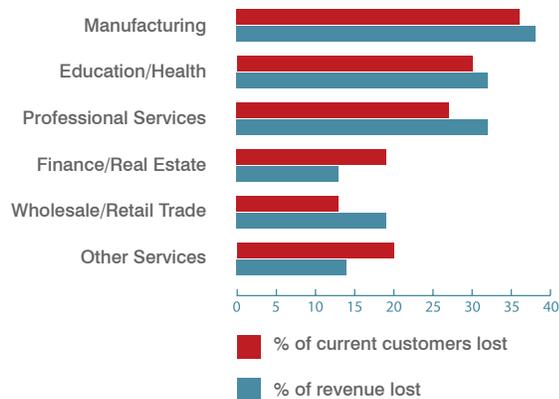
#### Percent of customers requiring in-person meeting

% of respondents



Source: Survey of business travelers (n=500)

#### Potential loss of current customers and revenue from not meeting in-person



Source: Survey of business travelers (n=500)

<sup>12</sup> Source: Kellogg School of Management

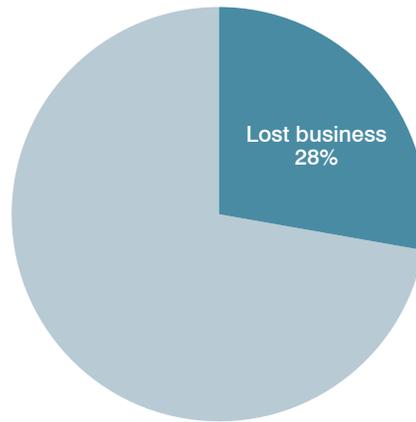
<sup>13</sup> Source: Kellogg School of Management

On average, corporate executives confirmed what business travelers asserted: 28% of their business would be lost without in-person meetings.

These losses do not relate only to client-specific travel. While external conferences have been considered among the more expendable forms of business travel, one-third of travelers believe these events to have a significant impact on customer retention.

### Percent of existing customers that would be lost without in-person meetings

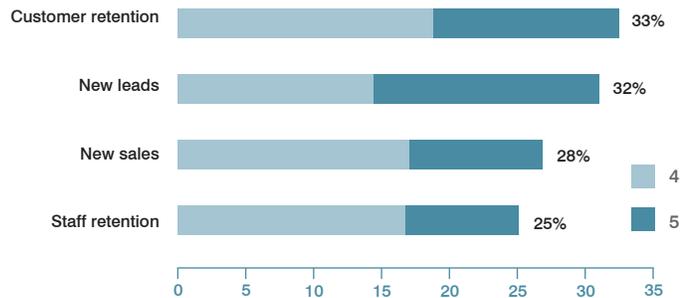
weighted average of responses



Source: Corporate executives survey (n=300)

### Benefits of external conferences to bottom line

% of respondents indicating high impact on 1 to 5 scale



Source: Survey of business travelers (n=500)

### 3.2. Converting prospects

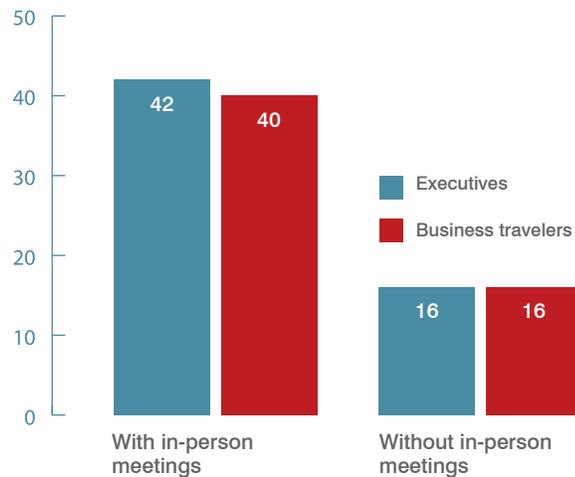
Travel and sales are inextricably linked. Prospects are more than twice as likely to become new customers with an in-person meeting. Separate surveys asked the same question of corporate executives and rank-and-file business travelers and the results were nearly identical.

Both executives and business travelers estimate that roughly 40% of their prospective customers are converted to new customers with an in-person meeting compared to 16% without such a meeting. Respondents reported an average conversion rate of 33% for their companies.

More than 70% of surveyed corporate executives and travelers perceive the optimal number of in-person meetings required to convert a new customer is between one and three meetings. The optimal number for most is 2-3 times.

#### Conversion rate of prospects to customers with and without in-person meeting

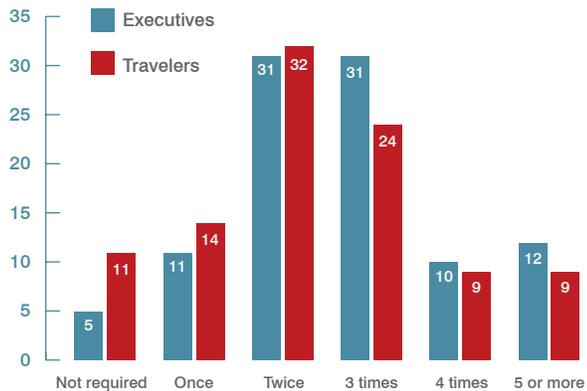
% (weighted average of responses)



Source: Survey of business travelers (n=500) and executives (n=300)

#### Optimal number of in-person meetings to win a new customer

% of respondents



Source: Survey of business travelers (n=500) and executives (n=300)

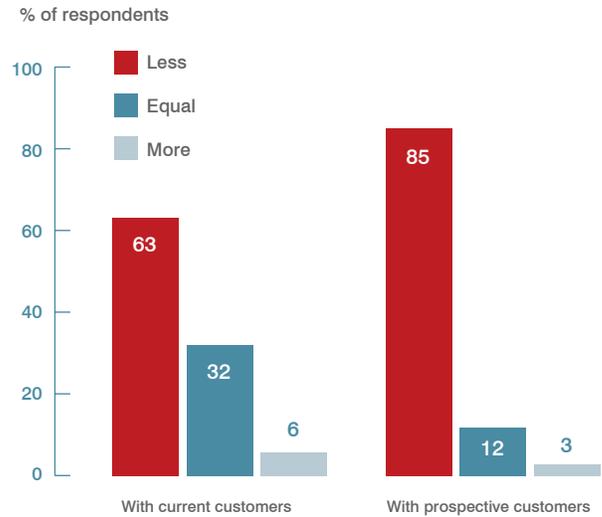
Certainly, web meetings and teleconferencing offer opportunities for cost savings as technologies continue to advance. Yet 85% of corporate executives perceive web meetings and teleconferences to be less effective than in-person meetings with *prospective customers* while 63% believe virtual meetings to be less effective than in-person meetings with *current customers*.

From a competitive standpoint, this has significant implications. Three-quarters of businesses believe that increasing travel, while competitors are reducing it, can build market share and customer relationships. Half (53%) say reducing business travel will give their competition an advantage.<sup>14</sup>

The relationship between business sales and trade show participation is particularly strong. More than half of business travelers stated that 5-20% of their company's new customers were the result of trade show participation.

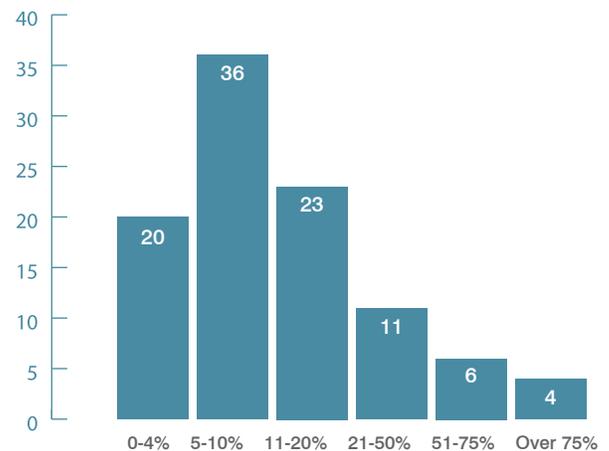
Conferences also yield business development returns. One-third of business travelers stated that conferences are important for generating new leads and 28% said the same for new sales.

### Effectiveness of virtual vs. in-person meetings



Source: Corporate executives survey (n=500)

### Percent of new customers gained from participation in trade shows



Source: Survey of business travelers (n=500)

<sup>14</sup> Kellogg School of Management

### 3.3. Building relational networks

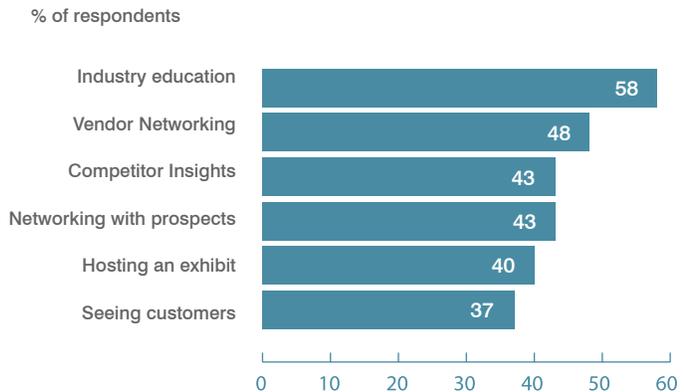
The returns of all types of business travel in terms of customers and prospects tend to be directly evident on a balance sheet. However, business travel yields a range of indirect benefits to company performance which are realized over a longer period of time. Many of these benefits fall within the category of building and strengthening relational networks.

Cooperative relationships are integral to company performance. And both executives and travelers confirm travel to be a catalyst to the development of relationships on every level, including: company, industry, vendor, partner, and prospect/customer relationships.

This is particularly evident in business travelers' views of trade show attendance. Networking with vendors (48%) and prospects (43%) were among the top cited purposes of trade shows as these events hold the potential for many personal interactions within a compressed period of time. According to the Center for Exhibition Industry Research, 69% of meetings attendees consider in-person networking to be "very or extremely important" to their job performance and 88% believe that exhibitions save their company time by bringing many vendors under one roof at the same time

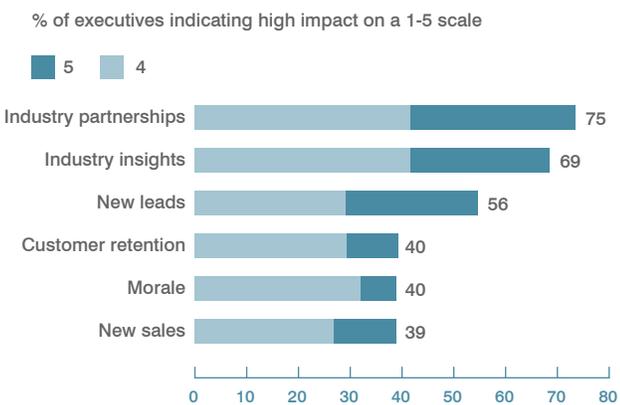
Corporate executives view the benefits of conferences and conventions with a similar emphasis on networking. Industry partnerships were cited by 75% of corporate executives as a significant benefit of conference travel.

#### Purpose of attending external trade show



Sources: Survey of business travelers (n=500)

#### Impact of external conferences and conventions



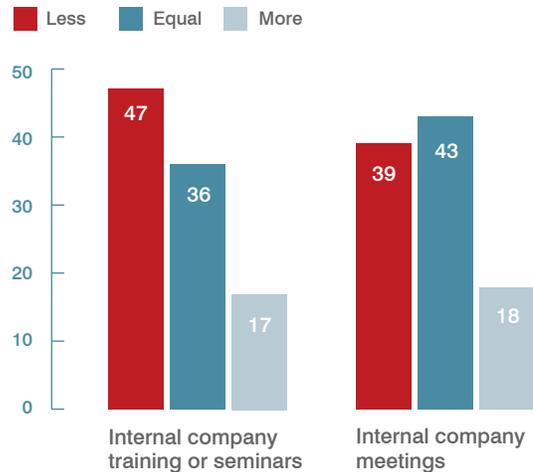
Source: Corporate executives survey (n=300)

Business travel expenses of all types must still be rationalized—particularly against the ready option of virtual meetings as technologies have improved.

As noted earlier, in-person meetings are significantly more effective than virtual meetings when engaging with current and prospective customers. The disparity in perceived effectiveness is not as great for internal company meetings and training. However, the balance still favors in-person meetings with 47% and 39% of business travelers perceiving virtual meetings to be less effective for training and company meetings, respectively.

The reasons for this perceived advantage to in-person meetings relates directly to the benefits of internal meetings. Corporate executives most frequently cited idea sharing, better communication, and staff morale as a significant impact of internal meetings. Face-to-face interaction is broadly considered to be the optimal means of achieving these goals.

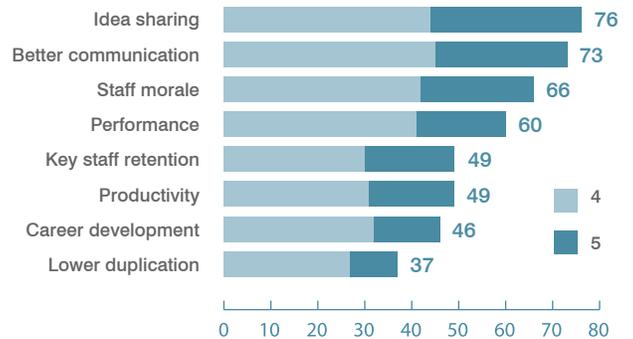
### Effectiveness of virtual vs. in-person meetings internal company purposes



Source: Survey of business travelers (n=500)

### Impact of travel for internal company meeting

% of respondents indicating high impact on a 1–5 scale



Sources: Corporate executives survey (n=300)

### 3.4. Investing in people

Business travel directly affects corporate performance, both through revenue generation and the longer term benefits of relationships and networking. Though perhaps easy to overlook, business executives and travelers also affirmed a strong relationship between travel and employee performance and satisfaction.

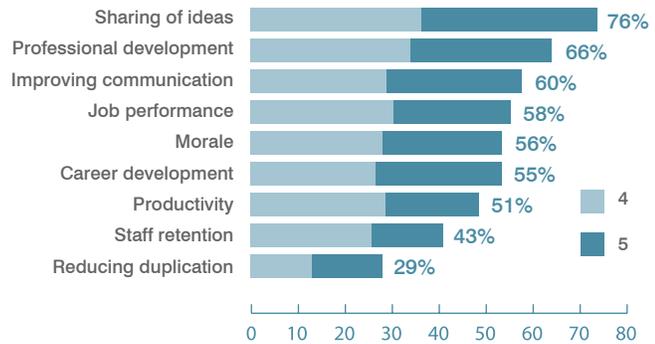
The “sharing of ideas” was confirmed by 76% of travelers as a benefit of internal travel indicating travel to be an investment in human capital. The majority of business travelers identified internal company travel as key to professional development (66%), job performance (58%), and morale (56%). And more than 40% of travelers perceive a strong relationship between travel and staff retention.

Business travelers also indicate significant personal benefits are derived from external conferences. Industry insights (74%), morale (60%) and productivity (59%) all received high marks from a majority of past conference attendees.

Corporate executives confirm the role that various types of travel play in employee performance and morale. Internal meetings receive the highest marks on both counts with 73% of executives indicating a significant impact on employee performance and 66% confirming the importance of travel to employee morale.

#### Benefits of travel for internal company purpose

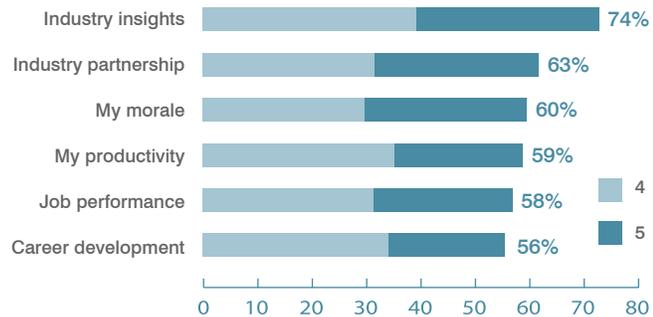
% of respondents indicating high impact on a 1-5 scale



Source: Survey of business travelers (n=500)

#### Benefits of external conferences to employees

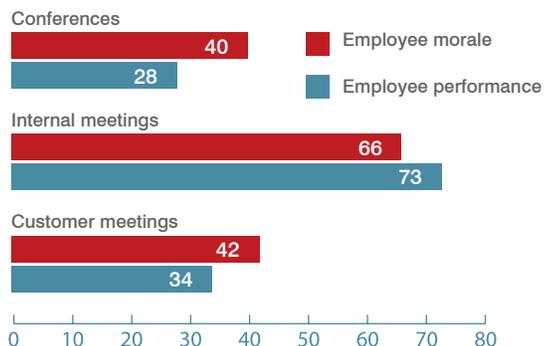
% of respondents indicating high impact on a 1-5 scale



Source: Survey of business travelers (n=500)

#### Benefits of travel to employees

% of executives indicating 4 or 5 on a 1-5 impact scale



Sources: Corporate executives survey (n=300)

One area of recent controversy has been incentive travel which is awarded either on the basis of performance or as a means of motivation. Although these trips have been targeted as excessive in certain cases, executives and business travelers alike give high marks to incentive travel. Nearly 80% of executives indicate that incentive travel has a significant impact on employee morale and job satisfaction. More than 70% believe that incentive travel has a real impact on employee performance.

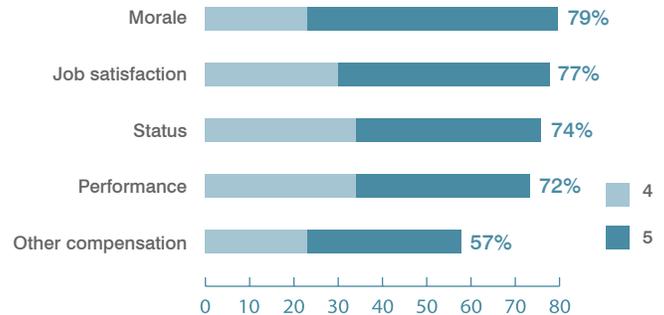
Those receiving these trips as part of their compensation agree, with approximately 80% affirming significant impacts on morale, job satisfaction, and job performance.

These findings are consistent with numerous other studies. Non-cash rewards have been shown to be two to three times more effective than cash rewards at improving performance.<sup>15</sup> Travel incentives tend to be more motivating as they are more memorable. They are also more flexible in comparison with cash rewards which can become expected over time.

Employees are more emotionally involved and willing to work harder for something perceived as a luxury item, rather than cash or a more practical reward. This is true even though the luxury item may cost less.<sup>16</sup> This differential in cost as well as the motivational benefit represent company returns on the investment in incentive and reward travel.

### Impact of incentive trips on employees

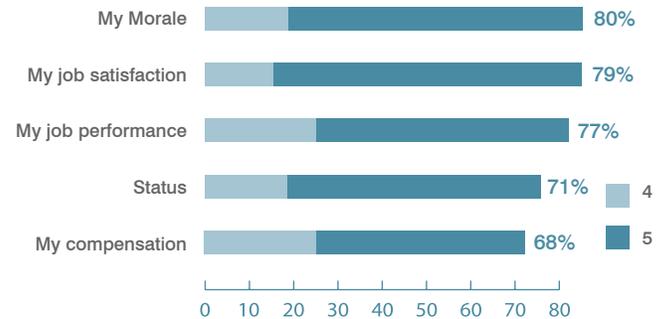
% of executives indicating high impact on a 1-5 scale



Source: Corporate executives survey (n=300)

### Impact of incentive and reward travel

% of travelers indicating high impact on a 1-5 scale



Source: Survey of business travelers (n=500)

<sup>15</sup> Source: Study by Scott Jeffrey, Ph.D., described in "Right Answer, Wrong Questions" from September 2004 Issue of SalesForceXP. Also supported by People, Performance and Pay, O'Dell and McAdams, and The Compensation Handbook. Cited by Maritz.

<sup>16</sup> Source: Study by Ran Kivetz, Associate Professor of Marketing at Columbia University Graduate School of Business, described in "Lock in On Luxuries" from September 2005 issue of SalesForceXP. Cited by Maritz.

## 4. Business travel and the bottom line

The surveys of executives and business travelers demonstrate business travel's benefit to client retention, business development, relational networking, and human resources. However, this still leaves a fundamental question to be answered: what is the financial impact of business travel on company performance? In order to answer this question in a holistic way, we need a method which will encompass both the direct (and generally more immediate) benefits and indirect (generally longer term) benefits of business travel.

Given the central importance of this question to corporate strategy, two independent analyses were conducted to quantify the return on investment of business travel.

We first sought the answer directly from corporate executives. We then developed an econometric model to assess the historic relationship between business travel spending and company performance.

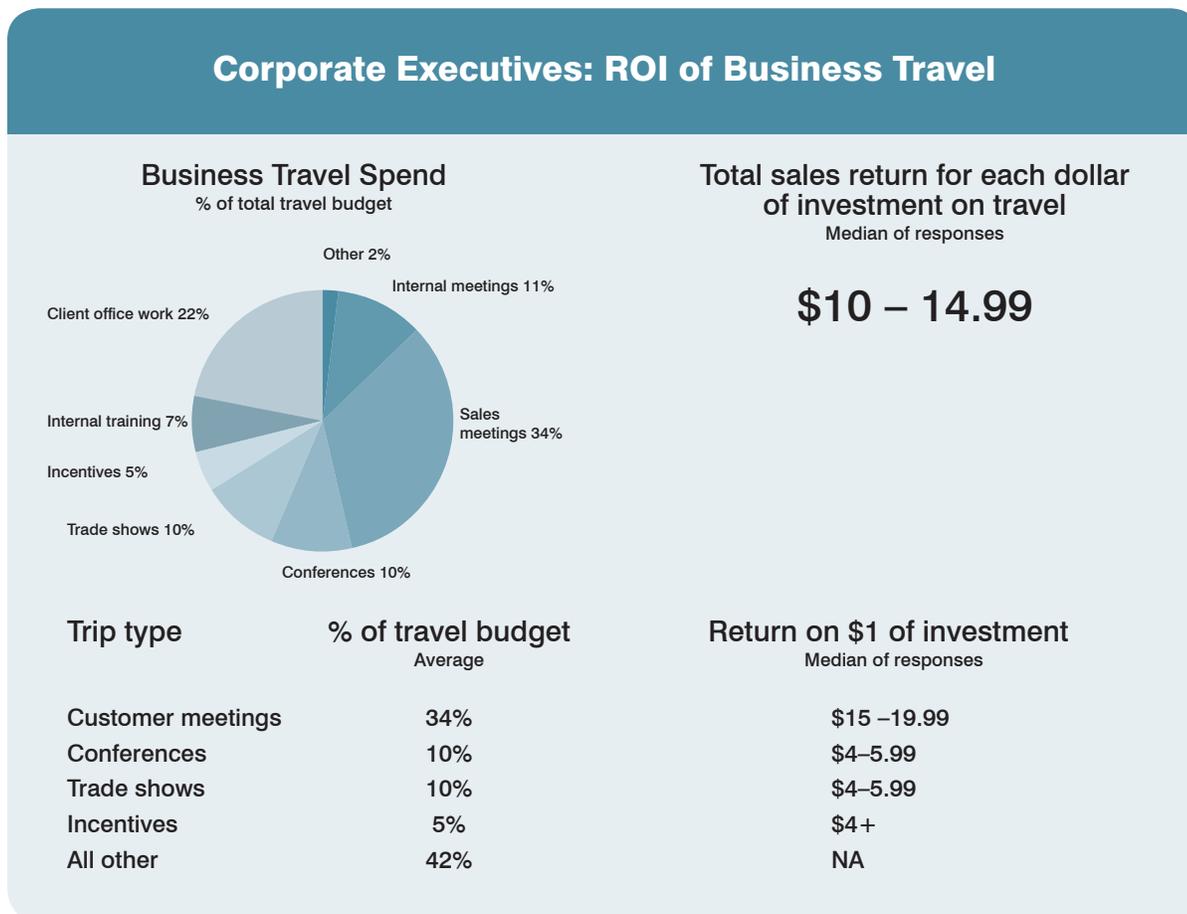
### 4.1. Financial returns according to executives

As a starting point, we asked 300 corporate executives for their views on the financial returns experienced by their companies as a result of investments in business travel. The question was asked independently for customer meetings, conferences, and trade shows. The median of responses was used to eliminate the bias of outliers, particularly at the upper end.

Executives indicated that the average return of business travel on revenue was between \$10 and \$14.99 per dollar invested across these three types of trips. This is a weighted average based on the distribution of business travel spending by type of trip.

Not surprisingly, customer meetings were cited as having the greatest returns, in the range of \$15-\$19.99 per dollar invested. Executives indicated returns for conferences and trade shows in the range of \$4-\$5.99.

In addition, executives stated that in order to achieve the same effect of incentive travel, an employee's total base compensation would need to be increased by 8.5%. For example, this implies a company would need to pay an employee making \$100,000 an additional \$8,500 to achieve the same effect as, say a \$2,000 all-expense-paid getaway. In this scenario, the incentive trip yields a return of more than four times the investment, not including any broader motivation the incentive opportunity provides to those who do not meet the award criteria.



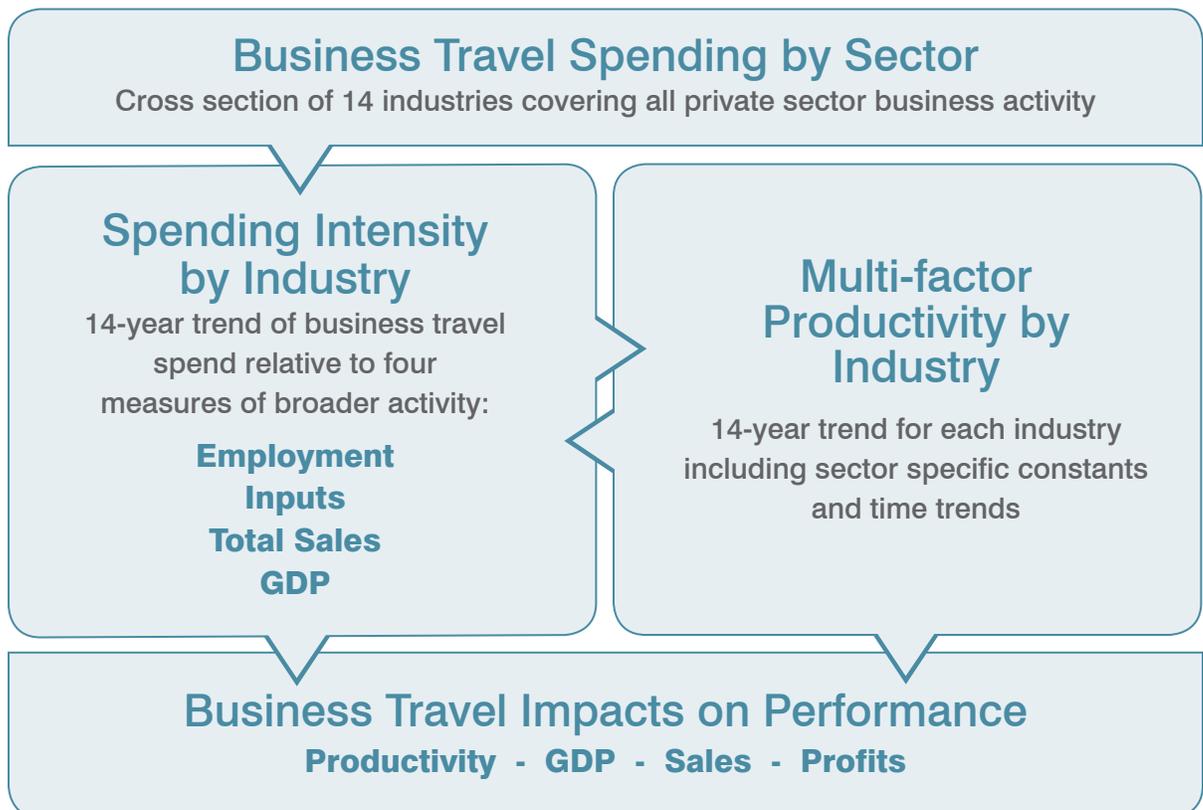
## 4.2. Returns according to econometric analysis

To confirm the perspectives given by corporate executives, a second analysis was conducted to assess the overall impact of business travel on financial performance using econometric analysis. The advantage to this approach is that it captures both direct and indirect benefits of business travel and is rooted in industry data covering the whole economy provided by the Bureau of Economic Analysis and the Bureau of Labor Statistics. The goal is to quantify the impact of travel spending on productivity and, by extension, on sales and profits using a combination of time series and cross-sectional panel econometrics. The diagram below illustrates the parameters and flow of the model. This approach has been successfully used by Oxford Economics in previous analyses for European travel and in particular detail

for business travel in the UK and has been documented in academic literature.

Business travel spending is measured by sector to identify specific trends for each industry arising from different travel usage. This also substantially increases the number of observations in the estimation and improves confidence that the estimated results are valid. Travel spending is analyzed relative to economic activity by sector to assess how changes in business travel intensity affect relative performance.

Performance is measured in terms of multi-factor productivity: this is the most complete measure of productivity and is defined as output per combined units of labor and capital inputs. According to the U.S. Bureau of Labor Statistics, “a change in multi-factor productivity reflects the change in output that cannot be accounted



for by the change in combined inputs of labor and capital.” By using this measure we are able to control for any increases in per-employee productivity that may arise from investment in new, more efficient technology. This measure also accounts for changes in the composition of the labor force, for example a shift towards fewer highly skilled (and highly compensated) workers rather than more low skilled workers.

The effect that business travel has had on productivity in recent years can be calculated using regression analysis and used to calculate the expected impact of current and future changes. Productivity is defined as a function of business travel intensity using panel estimation techniques over time and across industries,

The impact of business travel on industry GDP, total revenue and profits can then be calculated once the direct impact on productivity has been estimated.

#### 4.2.1. Company ROI

The model produces a range which represents the degree of uncertainty surrounding the results.

Based on the median of this range, the model tells

us that for every dollar invested in business travel, U.S. companies have experienced a \$12.50 return in terms of revenue. The modeling remarkably supports the results of the executive survey which indicated a \$10-\$14.99 return on revenue.

Not all of the increase in revenue is likely to pass through into higher profits. First, the increase in costs must be accounted for. Second, workers are likely to demand higher real wages as a result of heightened productivity. Real wage growth has historically been around two-thirds of productivity growth. We assume that this ratio holds for the increase in profits. Based on these assumptions, U.S. business travel has yielded \$3.80 in profits for every dollar spent.

The effects of business travel on corporate performance were found to be realized in the medium term, with the majority of the impact realized over approximately three years. The minimum and maximum figures reflect the model-defined ranges which were tested and found to be statistically significant: see technical appendix for full details.

### Econometric Analysis: ROI of Business Travel Impact of \$1 mn increase in spending

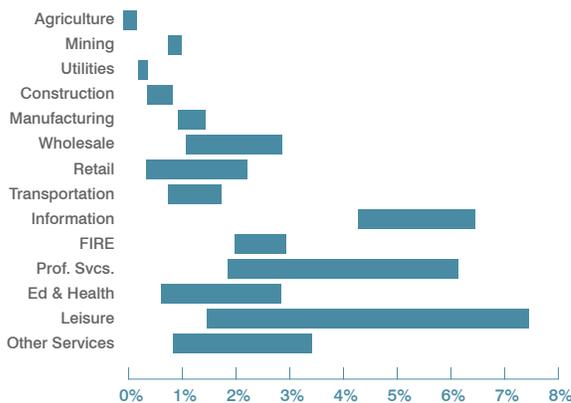
	Minimum	Maximum	ROI (midpoint)
<b>Revenue</b>	<b>\$8.5 mn</b>	<b>\$16.4 mn</b>	<b>12.5</b>
<b>Profits (without wage increase)</b>	<b>\$7.5 mn</b>	<b>\$15.4 mn</b>	<b>11.5</b>
<b>Profits (with wage increase)</b>	<b>\$2.5 mn</b>	<b>\$5.1 mn</b>	<b>3.8</b>

It is important to note that model was tested for causality in both directions. That is, the effects of business travel on corporate performance were isolated from the effects of corporate performance on business travel. It is also important to recognize that other factors contribute to multi-factor productivity in addition to travel. Although data are not available to isolate the effects of these other factors, the model does indicate a strong and positive correlation between business travel spending and a sector's changes in productivity over time.

The impact is stronger in sectors which have the greatest travel intensity. These sectors have also been shown to have the strongest correlation between performance and travel. Uncertainty surrounding impacts is greater for some individual sectors than for the whole economy. The estimated range of impacts according to different intensity measures is displayed below. The midpoint of each range is higher for sectors which have a higher intensity. For example, the first chart shows that sales would increase between 4%-7% for a 10% increase in travel spending within the information sector. The second chart shows a corollary increase in profits of 12%.

### Sales response (range of impacts)

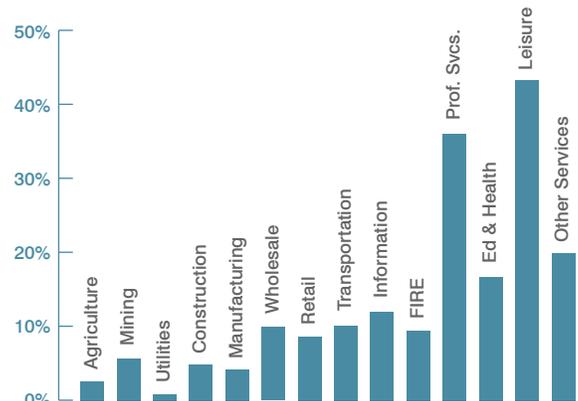
% sales response to 10% increase in travel



Source: Oxford Economics

### Profit response (model midpoint)

% profit response to 10% increase in business travel



Source: Oxford Economics

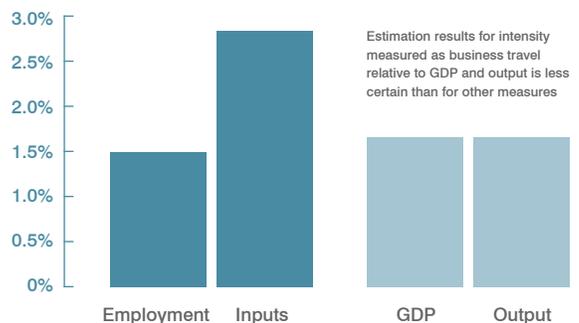
## 4.2.2. Economy ROI

Across the entire economy, the estimation results show that a 10% increase in business travel spending will increase multi-factor productivity and therefore GDP by between 1.5% and 2.8%.

This compares favorably with previous estimation results for Europe and the UK. A literature review carried out for this previous work found that a 10% increase in travel spending should raise productivity and GDP by between 0.5% and 4.0%.

## Business Travel Impact

GDP response to 10% increase in travel estimated according to 4 different measures of business and travel intensity



Estimation results for intensity measured as business travel relative to GDP and output is less certain than for other measures

Source: Oxford Economics

Results for the previous Europe-wide study for the region as a whole as well as individual countries are towards the lower end of this range at roughly 1%.

These impacts include only the effects of travel on the performance of the company making the travel investment.

### 4.2.3. What if business travel stops?

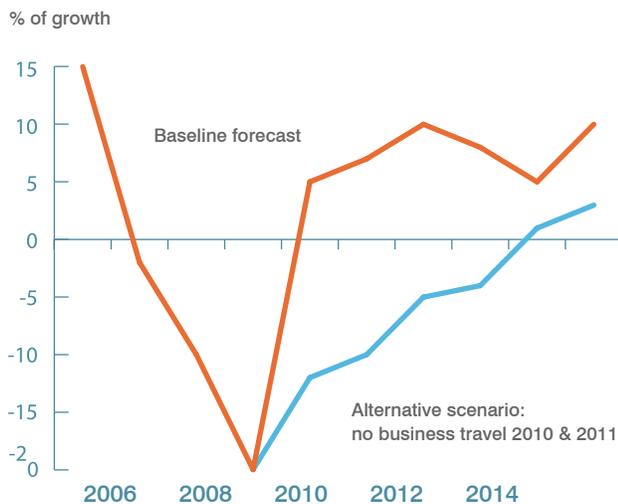
The analysis was then extended to estimate the extent to which corporate performance would be adversely affected if a given company eliminated business travel for two years.

The following charts show the impact on U.S. corporate profits within this alternative scenario in which all business travel is eliminated in 2010 and 2011. The first chart shows the declines in profits which would be realized by an average U.S. company. The long-run impact on productivity is derived according to the mid-point of all estimation results. This is used as an input to Oxford Economics' Global Macroeconomic Model to determine the extent of the impact on profits over time. The negative impact on profits is felt almost immediately and peaks in the year after the two year travel hiatus. In the first year of a complete shut-down of travel, the company experiences a profit decline of 12% instead of a 5% increase. It then takes three years for profit growth to catch-up with the baseline scenario of continuous business travel.

The second chart shows the loss in profits by sector over a cumulative five-year period beginning in the first year when business travel was cut. The losses largely mirror the relative

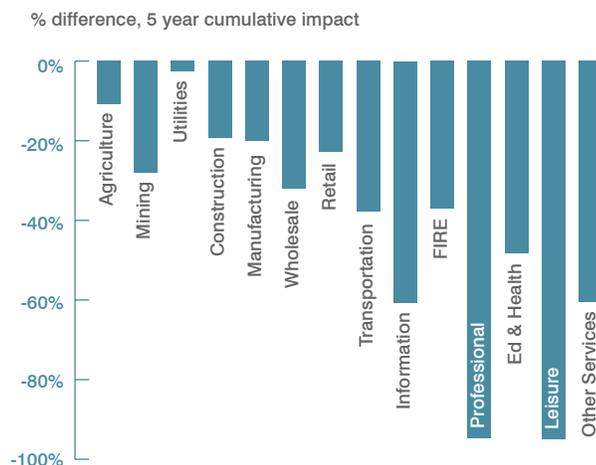
business travel intensity of each sector. That is, the more a company typically spends on business travel, the greater its profit losses when business travel is eliminated.

### US Profits: alternative scenarios



Source: Oxford Economics

### US Profits: sectoral effects



Source: Oxford Economics

## 5. What About Government Travel?

All of the analysis to this point has focused on the contribution that travel makes to company performance. However, travel also plays a role in the productivity of government.

The US Bureau of Economic Analysis (BEA) estimates that the public sector spent \$32 billion on travel last year. This is higher than for most other sectors and ranks government as the third highest spending sector, just ahead of manufacturing. And government spending on travel as a share of economic output is higher (1.4%) than for the private sector (1.0%). Since government workers do not travel to meet clients for sales purposes, it can be assumed that the incidence of travel for meetings, conferences and conventions is much higher than the private sector average. Due to the size of the public sector in terms of both employment and travel spending, government travel plays a significant role in the U.S. economy as a whole.

### 5.1. The ROI of government travel

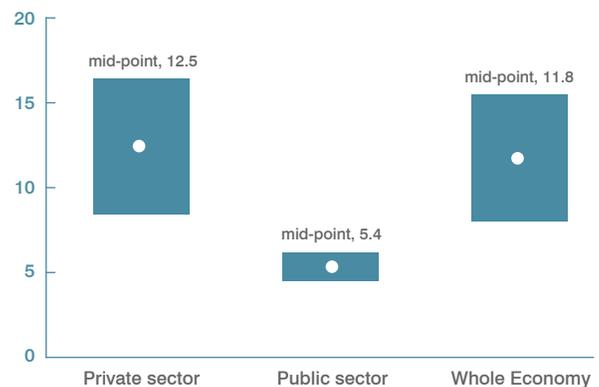
The survey of executives was combined with a modified econometric analysis to estimate the benefits of government travel to public sector performance as well as to the wider economy.

Business travel improves the productivity of the public sector since it delivers similar networking and human capital benefits as it does for the

private sector. Although meetings with customers or prospects is not relevant to the public sector, the productivity of public sector workers is improved in much the same way as for private sector workers through travel to conferences, trade shows and meetings. Better relationships with peers and suppliers can be built as well as ensuring that best practices are employed.

### Public & Private Sector Travel Impact

Estimated ROI range



Source: Oxford Economics

Survey results for the benefits of relevant types of travel have been used to augment the econometric model to estimate returns on government travel. Although governments do not generate revenue like companies, productivity is still a relevant concept to the public sector. The analysis indicates that an increase in business travel spending of \$1 million will increase government worker

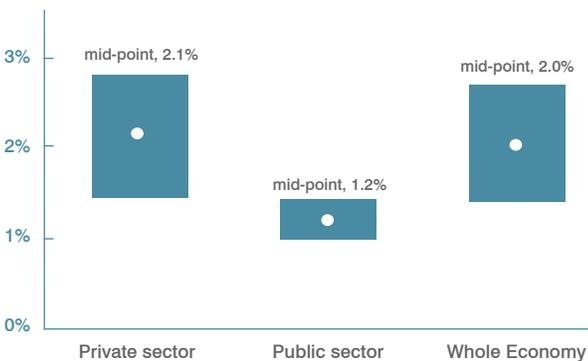
productivity and therefore output by between \$4.6 million and \$6.3 million. If we use the midpoint of this range and apply the concept of private sector concept of ROI, government travel yields a return of 5.4 to 1. As expected, this is lower than for the private sector. However, the returns are still substantial enough to support the position that travel is an important driver of government productivity.

Viewed from a macroeconomic perspective, a 10% increase in government travel would increase public sector productivity and GDP by 1.0%-1.4%.

Across the entire economy, the econometric results show that a 10% increase in business travel spending will increase multi-factor productivity and therefore GDP by between 1.5% and 2.9% by combining the estimated impact of private and public sector business travel.

### Public & Private Sector Travel Impact

Estimated range of GDP response to 10% increase in travel



Source: Oxford Economics

## 5.2. Measurement approach

Business travel by government workers differs from travel by private sector employees by being concentrated in meetings, conference and

convention travel rather than sales related travel. Since the return on travel and associated elasticity for the government is expected to be significantly lower than for the private sector this cannot be included in the same pooled estimation. There is insufficient data to reliably estimate the impact of government business travel on productivity and output by itself.

Instead, the estimated elasticities for the private sector have been adjusted according to survey results for different types of travel, and for the relative intensity of private and public sector business travel. Differences in productivity and output have also been accounted for.

The survey of executives suggested that sales related travel to meet customers generated a return of \$15-\$19.99 per dollar invested, with an average return in the range \$10-\$14.99 for all types of travel. Since public sector business travel is not sales oriented, this high return on travel must be discounted. It is more likely that public sector travel generates a return roughly in the range \$4-\$5.99 consistent with the return on travel to tradeshows and conferences from the same survey.

Econometric results for the private sector have been adjusted for this relative difference in return by removing sales-related trips from the ROI. This provides a consistent elasticity for government productivity and output in response to changes in travel spend. The estimated elasticities are also adjusted for differences in the intensity of business travel between the public and private sectors.

# 6. Econometric Analysis Details

## 6.1. Methodology Overview

To estimate the impact of business travel on performance we compare trends in data for business travel and multi-factor productivity across different sectors. Multi-factor productivity is the best indicator of performance with regard to the expected impact of business travel. It measures improvement in the level of output due to an improvement in employee performance; independent of increased investment in technology, or changes in the labor composition. If business travel does improve performance then a strong relationship should be identifiable between travel and productivity.

This approach has been successfully used by Oxford Economics in previous analysis for European travel and in particular detail for business travel in the UK and is consistent with other similar studies. In an initial review of the academic literature it was found that a 10% increase in transport services would raise productivity by between 0.5% - 4.0%. Oxford Economics' results for Europe and the UK are towards the lower end of this range. Results for the U.S. are slightly higher than for Europe but are also within the lower half of that range.

A clear relationship was identified between business air usage and productivity for 24 EU countries over a 10 year period. Countries which spent most on travel as a share of GDP also

experienced the highest productivity. Robust econometric techniques confirmed a long-run relationship between business air travel and productivity. A 10% increase in transport raises productivity by roughly 1%.

In more detailed analysis for the UK, a similar long-run relationship was found between business travel relative to economic activity and productivity taking sectoral differences into consideration. Pooled estimation was carried out across sectors covering the entire economy. This helped to account for different trends and travel intensity across sectors and added to confidence in results by relying on a richer sample of information. This study also found that a 10% increase in business travel raises productivity by roughly 1% in the long-run.

Importantly, estimation results for the UK were able to find a relationship the level of travel and the level of productivity rather than just growth rates. This raised confidence that the estimated long-run relationships are valid.

A similar approach can be applied to U.S. data and pooled estimation has been carried out across 14 sectors and 13 years. The primary benefit of this approach is that a greater number of observations can be used to generate more robust estimates of common factors giving greater confidence in results. Changes in aggregate productivity arising from differences in sectoral

composition are also controlled for while sector specific trends are also incorporated. Sectors are defined at the NAICS 2-digit level of aggregation covering all private sector business activities.

In estimating the impact of business travel, intensity (i.e. the proportion of expenses represented by travel) is more relevant than the level of business travel. Business travel spending has increased for all sectors over time, partly due to higher costs/prices but also as growth in real output generates greater demand for inputs. An increase in business travel spending proportional to an increase in staff numbers is unlikely to add to employee performance other than any scale effects. Improved performance is more likely to arise from an increase in travel relative to other measures of economic activity. Estimating productivity relative to business travel spending may also generate spurious results as productivity has also trended upwards over time.

Four measures of business travel intensity have been tested as well as spending for comparison and the most statistically valid test results are used. Different econometric statistics for the four measures have been compared to increase confidence that identified relationships are not spurious. Travel intensity has been calculated as business travel spending relative to GDP, Gross Output, Intermediate Purchases and Employment. For the first three ratios both numerator and denominator are current price dollar concepts and are directly comparable. The U.S. Travel Association's Travel Price Index has been used to deflate spending in comparison to employment for the final measure of intensity.

## 6.2. Previous work

The methods employed are not new to this analysis and have been effectively used to address very similar problems in Europe. Previous work by Oxford Economics focused on business travel within Europe and showed that a strong statistical link can be established between business travel intensity (especially business use of air services) and productivity.

A clear correlation has been observed across the EU between business air transport intensity and productivity. Countries with a greater air transport usage relative to GDP have higher levels of multi-factor productivity growth (controlling for other influences such as educational standards and levels of R&D investment). Robust econometric techniques were used to confirm that business air travel made a significant contribution to productivity growth in recent decades.

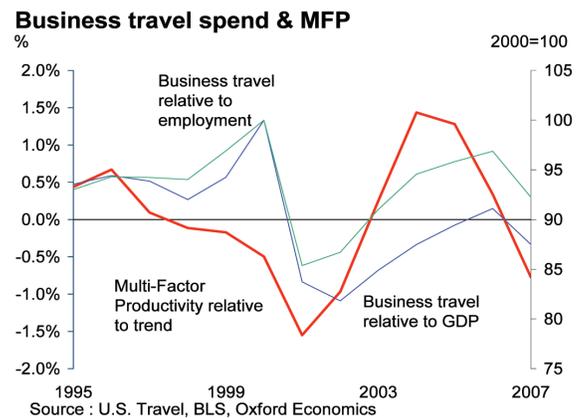
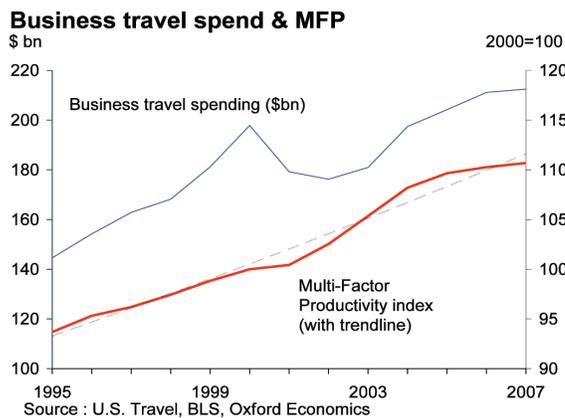
It has also been found that productivity and business travel move together at a sectoral level in more detailed analysis for the UK. Changes in business travel relative to output have helped drive growth in multi-factor productivity over time. Econometric analysis proved that business travel and productivity are statistically “integrated” and that business travel does indeed generate productivity growth. A 10% increase in business travel has been found to increase productivity and GDP by roughly 1% in the long run.

### 6.3. Consistent methodology for U.S.

A similar relationship between travel and performance can be observed in U.S. data and can also be identified by applying similar econometric techniques. Business travel spending and productivity have followed a similar growth trend over time as illustrated by the following chart. While this is an essential quality for valid

estimation it is not sufficient to determine a causal relationship and could be determined by a common third factor or be spurious.

More importantly, business travel and productivity have followed a roughly similar cycle in recent years as movement in productivity above trend has been accompanied by an upturn in business travel intensity.



To better identify movement over the cycle and hence a causal relationship we look at travel intensity measured as business travel spending relative to economic activity. We initially considered four different measures of intensity: travel relative to Gross Output, GDP, Intermediate Purchases, and Employment. The focus in results is on the latter two measures which best fit theory developed in previous sections as well as delivering the best statistical results and clearly follow a similar cycle to multi-factor productivity (adjusted for trend) in the above charts. In line with previous sections it follows that travel per employee offers strong returns to performance. It also follows that travel spending relative to other intermediate inputs to the production process would improve performance. Results are given for both of these intensity measures to give a range of plausible results. Results for the other two measures also lie within this range, slightly closer to results for the employment ratio.

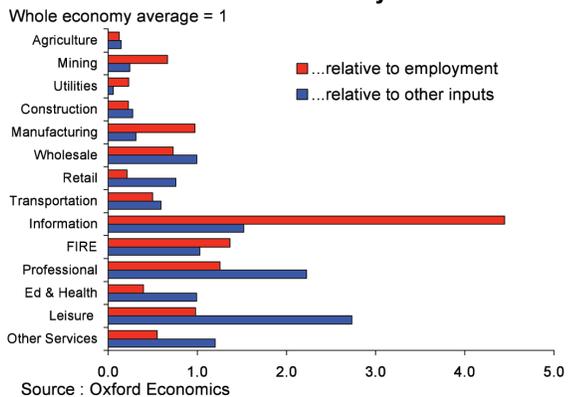
By comparing productivity with business travel intensity we are also able to find a robust relationship between levels rather than just growth rates. This increases confidence that the relationships are valid.

Correlation between travel intensity and productivity is stronger at a sectoral level than for the whole economy. Key sectors which have a high business travel intensity display a strong correlation between intensity and MFP. Service sectors such as information and professional services have significantly higher travel intensity

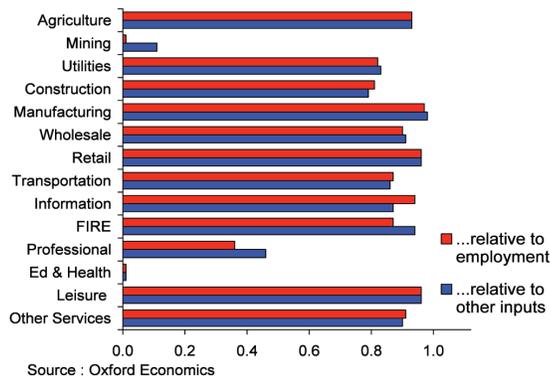
than other sectors. Very strong correlations between productivity and travel intensity can be observed for these sectors.

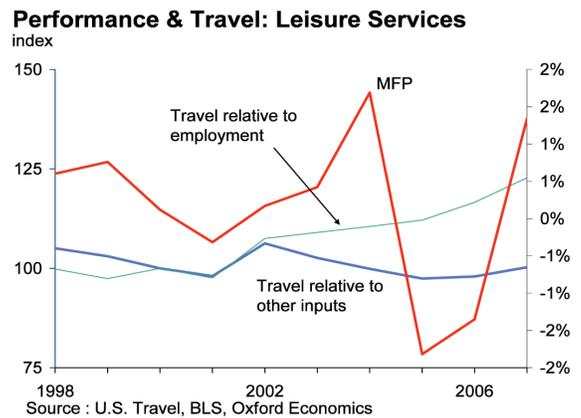
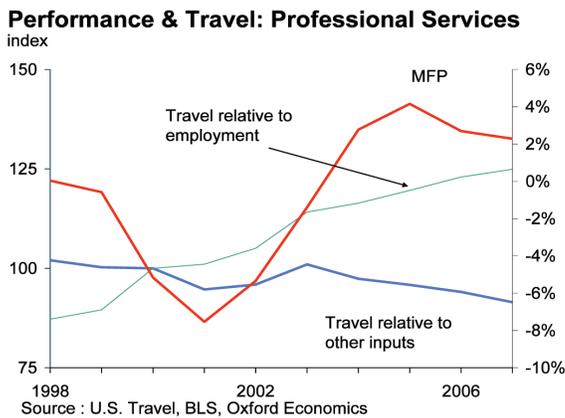
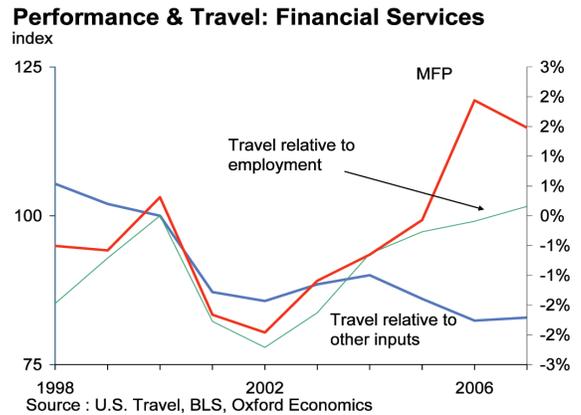
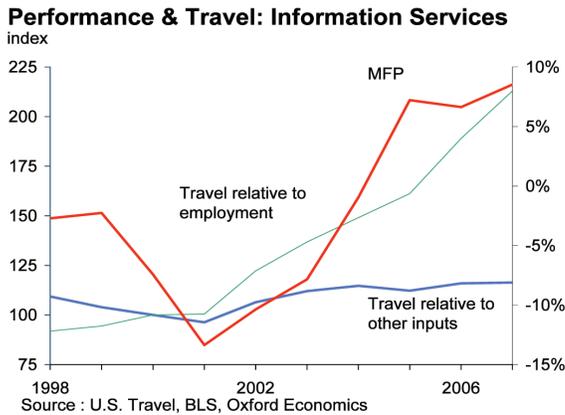
A common cycle between business travel intensity and productivity can be seen for key service sectors in the following charts. Correlation is not perfect and other factors are obviously important in determining productivity but the charts illustrate that peak and trough years in travel intensity and productivity tend to coincide.

**Relative business travel intensity**



**Correlation: business intensity & MFP**





Panel estimation techniques have been applied to sectoral data covering all private sector business activity to estimate the impact of business travel on economic performance. Estimation at the whole economy level is less certain due to the lack of time series data for both business travel and productivity.

Sectoral data has been drawn from Input-Output tables and scaled to be consistent with business spending by category according to the BEA TTSA tables. Multi-factor productivity data is taken from the BLS which already calculates some sectoral detail. Further calculation to derive a consistent sectoral data set was required and consistent productivity calculation was applied drawing on previous Oxford Economics calculation as

well as existing research by both the UN and the Groningen Growth and Development Centre.

By using panel estimation across sectors, the effect of changing sectoral composition on productivity is controlled. This technique also allows a greater number of observations to be included to increase confidence in the validity of results. Business travel as a share of GDP is included as an explanatory variable in equations for productivity with a common coefficient. Differences in demand for air services across sectors are controlled by weighting the coefficients according to travel spending intensity. Further sectoral differences are included for by the inclusion of separate constant and time trend coefficients for each sector.

Before estimation of the equations, formal econometric tests have been performed to ensure the statistical validity of the assumptions and hence the results and conclusions. These tests have proven that the estimation is statistically valid and business travel does lead to improved performance.

1. First unit root and co-integration tests are carried out to confirm that productivity and business travel follow a consistent linear trend. This is essential for valid relationships to be identified.
2. Causality has been tested to ensure that observed correlations are not spurious and that the assumed causal relationship does exist. We find that causality works both ways as expected. An improvement in economic performance can result in almost immediate increase in travel intensity whilst in economic downturns we have observed some cuts in intensity. However, tests also indicate that there is a lagged response between travel and performance. An increase in travel intensity has performance benefits which are realized in the medium term, which we next quantify.

## 6.4. Econometric Tests

Before estimating relationships we need to establish whether the identified time series have the necessary statistical properties for estimation and whether there is evidence that the assumed relationships exist.

### 6.4.1. Unit Root tests

Unit root tests suggest that travel intensity and productivity share the same order of integration. It is essential that this is the case for dependent and explanatory variables in order for estimation of levels to be valid and suggests that they are co-integrated. Augmented Dickey-Fuller (ADF) and Phillips-Perron (PP) tests show that for whole economy productivity and all four measures of intensity have a single unit root. On this basis all four measures of intensity are valid for estimation. This test also suggests that there is a unit root for business travel spending and is also valid for estimation.

<b>Unit Root tests for business travel intensity</b>					
Null Hypothesis: Unit root in intensity	Level		1 <sup>st</sup> Difference		Obs
	t-statistic	P-value	t-statistic	P-value	
Employment intensity					
<b>ADF</b>	-0.29	0.91	-3.34	0.03	13
<b>PP</b>	-0.29	0.91	-3.34	0.03	13
Intermediate inputs intensity					
<b>ADF</b>	0.83	0.99	-4.32	0.00	13
<b>PP</b>	1.04	0.99	-4.30	0.00	13
GDP intensity					
<b>ADF</b>	-0.45	0.88	-4.52	0.00	13
<b>PP</b>	-0.45	0.88	-4.53	0.00	13
Gross output intensity					
<b>ADF</b>	0.20	0.97	-4.50	0.00	13
<b>PP</b>	0.28	0.97	-4.50	0.00	13

Since estimation will rely on panel estimation techniques we have also tested the equivalent statistics in panel data across sectors. Panel tests on productivity and business intensity across

sectors also suggest that all time series have a single unit root. Since panel tests are involve more observations this increases confidence in statistical properties.

<b>Panel Unit Root tests for productivity by sector</b>					
Null Hypothesis: Unit root in $\ln(\text{MFP}_i)$	Level		1 <sup>st</sup> Difference		Obs
	t-statistic	P-value	t-statistic	P-value	
Null Hypothesis: Unit root (assumes common unit root process)					
<b>Levin, Lin &amp; Chu t*</b>	1.92	0.97	-7.86	0.00	267
<b>Breitung t-stat</b>	4.01	1.00	-7.12	0.00	253
Null Hypothesis: Unit root (assumes individual unit root process)					
<b>Im, Pesaran and Shin W-stat</b>	1.45	0.93	-8.79	0.00	267
<b>ADF – Fisher Chi-square</b>	22.62	0.75	115.35	0.00	267
<b>PP – Fisher Chi-square</b>	19.48	0.88	150.75	0.00	280

<b>Unit Root tests for whole economy productivity</b>					
Null Hypothesis: Unit root in $\ln(\text{MFP})$	Level		1 <sup>st</sup> Difference		Obs
	t-statistic	P-value	t-statistic	P-value	
<b>ADF</b>	-1.68	0.72	-5.09	0.01	21
<b>PP</b>	-1.68	0.72	-4.27	0.02	21

<b>Panel Unit Root tests for business travel intensity by sector</b>					
	Level		1 <sup>st</sup> Difference		Obs
	t-statistic	P-value	t-statistic	P-value	
Employment Intensity					
<b>Levin, Lin &amp; Chu t*</b>	2.00	0.98	-11.38	0.00	174
<b>Im, Pesaran and Shin W-stat</b>	0.89	0.81	-7.78	0.00	174
<b>ADF – Fisher Chi-square</b>	29.53	0.39	105.56	0.00	174
<b>PP – Fisher Chi-square</b>	29.50	0.39	110.51	0.00	182
Intermediate inputs intensity					
<b>Levin, Lin &amp; Chu t*</b>	1.09	0.86	-10.37	0.00	174
<b>Im, Pesaran and Shin W-stat</b>	2.15	0.98	-7.79	0.00	174
<b>ADF – Fisher Chi-square</b>	17.06	0.95	106.85	0.00	174
<b>PP – Fisher Chi-square</b>	17.07	0.95	150.49	0.00	182
GDP intensity					
<b>Levin, Lin &amp; Chu t*</b>	-1.04	0.15	-12.32	0.00	174
<b>Im, Pesaran and Shin W-stat</b>	-0.08	0.47	-8.55	0.00	174
<b>ADF – Fisher Chi-square</b>	32.13	0.27	116.25	0.00	174
<b>PP – Fisher Chi-square</b>	32.13	0.27	155.73	0.00	182
Gross output intensity					
<b>Levin, Lin &amp; Chu t*</b>	-0.73	0.23	-11.34	0.00	174
<b>Im, Pesaran and Shin W-stat</b>	0.40	0.66	-8.32	0.00	174
<b>ADF – Fisher Chi-square</b>	30.71	0.33	114.24	0.00	174
<b>PP – Fisher Chi-square</b>	29.89	0.37	159.59	0.00	182

Further co-integration tests on the validity of the estimated relationships have been carried out for productivity and travel intensity by sector. These are an extension of unit root tests to jointly determine whether dependent and explanatory variables follow a consistent trend over time. Unit root tests have been performed on equation residuals and indicate they are stable over time. Formal co-integration tests also confirm that estimation is valid. Differences between trend growth rates in dependent and explanatory variables have remained constant.

#### 6.4.2. Causality tests

Having determined that identified time series are correlated and co-integrated the assumed causality must be tested. Even though time series properties imply that valid estimation is being carried out it does not necessarily follow that assumed causal relationships are true.

Granger causality tests are used to check the validity of the assumption that business travel intensity influences productivity at a sectoral level. The alternative is that correlation is coincident or both series being influenced by a common third factor. The Granger causality test compares the performance of indicators over time and establishes precedence. The extent to which past values of both the explanatory and

dependent variable influence current values is assessed in a series of regressions involving different lag structures. If the inclusion of lagged values of business travel intensity makes a statistically significant contribution to predictions of productivity then business travel can be said to

Granger cause productivity. Tests are run for the null hypothesis that there is no causal relationship between indicators and the regression F-statistic is used to reject or accept this.

<b>Granger causality tests</b>								
Null Hypothesis: Business travel does not Granger cause Productivity								
(maximum tested lag length: 4 years)								
Intensity measure:	Employment		Intermediate inputs		GDP		Gross output	
	F-stat	P-value	F-stat	P-value	F-stat	P-value	F-stat	P-value
Whole economy	3.8	0.06	5.2	0.03	4.1	0.05	4.5	0.04
By sector:								
Agriculture	5.1	0.20	0.6	0.57	3.2	0.39	1.0	0.62
Mining	554.1	0.01	16.2	0.00	86.4	0.01	322.2	0.00
Utilities	1.1	0.39	0.4	0.77	1.5	0.30	1.0	0.41
Construction	8.5	0.03	3.7	0.08	1.6	0.52	0.3	0.65
Manufacturing	4.5	0.18	0.8	0.56	8.1	0.16	1.5	0.35
Wholesale	5.7	0.08	17.6	0.09	5.5	0.04	6.2	0.05
Retail	0.8	0.51	1056.6	0.02	6.8	0.28	23.0	0.16
Transportation	1.4	0.37	2.3	0.17	2.5	0.15	2.3	0.17
Information	15.7	0.11	3.3	0.10	3.5	0.27	1.6	0.23
FIRE	52.7	0.07	8.5	0.03	3.8	0.13	4.0	0.12
Professional	0.1	0.88	0.5	0.63	1.2	0.30	1.0	0.34
Ed & Health	0.5	0.68	3.2	0.14	1.9	0.28	2.4	0.21
Leisure	27.3	0.14	1.2	0.47	4.6	0.34	3.0	0.41
Other Services	171.4	0.03	8.5	0.25	1418.3	0.02	132.6	0.07

The above table clearly indicates that we can reject the null hypothesis that business travel intensity does not granger cause productivity. This is evident for most measures at the 95% confidence level and for all measures at the 90% level. This is less certain at the sectoral level where data are more erratic, but the null hypothesis can be rejected for some key high intensity sectors, with a degree of agreement across intensity measures to increase confidence.

It is unlikely that a casual relationship exists for some sectors but not others and we do not exclude any sectors on the basis of this test. Results may also be skewed by some erratic data for sectors taking a high weight in calculation with relatively few time series observations. This highlights the benefit of using pooled estimation across sectors to increase the number of observations and confidence.

It is to be expected that causality runs both ways in the strong observed correlations between travel intensity and productivity. Higher productivity (and revenue and profit) may cause an immediate increase in travel and profits are often included as an explanatory variable in models of business travel. The impact of travel on performance is likely to occur with more of a lag with benefits being fully realized in the medium to long term.

The dual causality is indicated below as the null hypothesis that productivity does not cause travel

can be rejected for most measures at the whole economy and sectoral level. Causality is evident for a shorter lag length as expected.

Interestingly, by using employment intensity productivity can be seen to be influenced by business travel as for other measures, but the inverse relationship is not clear. Employment intensity is the measure which we would expect to best fit theoretical relationships.

<b>Granger causality tests</b>								
Null Hypothesis: Productivity does not Granger cause Business Travel								
(maximum tested lag length: 2 years)								
Intensity measure:	Employment		Intermediate inputs		GDP		Gross output	
	F-stat	P-value	F-stat	P-value	F-stat	P-value	F-stat	P-value
Whole economy	1.1	0.37	5.5	0.02	4.2	0.05	5.4	0.03
By sector:								
Agriculture	2.3	0.46	18.5	0.09	3.2	0.10	4.5	0.09
Mining	5.1	0.05	1.3	0.47	6.2	0.07	2.9	0.17
Utilities	2.1	0.18	7.0	0.02	2.9	0.12	4.0	0.07
Construction	1353.7	0.02	3.7	0.08	3.8	0.08	6.4	0.03
Manufacturing	4.5	0.06	13.0	0.00	6.3	0.03	12.2	0.01
Wholesale	1.6	0.23	53.3	0.01	1.1	0.32	3.3	0.10
Retail	7.0	0.02	26.9	0.02	9.3	0.18	2022802	0.00
Transportation	5.4	0.21	12.6	0.01	5.9	0.04	8.7	0.01
Information	28.0	0.00	24.8	0.00	23.7	0.00	28.6	0.00
FIRE	10.1	0.23	31.6	0.04	744.7	0.03	654.0	0.03
Professional	1.6	0.26	2155.8	0.02	3.4	0.09	8.4	0.03
Ed & Health	13.3	0.20	4.8	0.33	4.2	0.29	3.5	0.37
Leisure	30.7	0.13	7.2	0.27	243.5	0.05	33.1	0.13
Other Services	5.1	0.32	1.5	0.25	8.9	0.18	44.5	0.11

## 6.5. Regression

Having established that estimation is valid both in terms of correct statistical properties and that there is a statistical basis for the assumed causal relationship, we estimate productivity as a function of business intensity.

Regressions have been run to include different lags on both dependent and explanatory variables since impacts are not immediate and causality tests implied lags may be present. In the first instance, simple equations have been run for productivity as a function of travel intensity. All four measures of intensity give similar robust results with high R-squared statistics for key sectors and t-statistics imply that estimated coefficients are valid.

In general, the inclusion of additional lagged explanatory variables does not significantly improve test statistics for the equations or specific coefficient values: equation R-squared statistics are little changed while coefficient t-statistics are worse and in some cases are not statistically valid.

By including a lagged value of the dependent variable, equations statistics are significantly improved. Equation R-squared values are improved as are Durban Watson statistics. This improves confidence that autocorrelation is not present in the estimated equations. This equation structure implies different time series properties to previously estimated equations without lags. But for the preferred two intensity measures (travel relative to employment and to other

inputs) very similar medium term impacts can be derived compared with the previously estimated effects including no lags.

Measuring intensity as travel relative to employment or to other inputs (our preferred measures) t-statistics for common coefficients suggest that we can have at least 95% confidence that estimated elasticities are true. These t-statistics are slightly lower than for equations estimated with zero lags. But since other equation statistics are stronger and estimation is valid, on balance we prefer to use the equations with lags. By measuring intensity as travel relative to total output or GDP t-statistics suggest that estimated coefficients are not valid supporting our preference for the other measures.

Equation elasticities look very different since the relative sizes of the explanatory variables are also very different. But the elasticities imply very similar impacts for business travel in response to changes in travel spending. Sector specific trends are consistent across the different estimates. R-squared measures are also consistent as the same sectors are well defined in all measures. Unsurprisingly the high intensity sectors are well defined by the equation.

Tables indicate the aggregate long-run coefficients on business travel intensity and lagged productivity as well as the associated t-statistics. Equation R-squared and Durban Watson statistics are also included for each sector as well as specific constants and time trends.

<b>Estimation Results: Employment intensity measure</b>						
Equation: $\text{Log}(\text{MFP}_{i,t}) = a_i + b_i \cdot \text{TIME} + \alpha \cdot \text{Log}(\text{MFP}_{i,t-1}) + \beta \cdot (\text{BUS\_SPEND}_{i,t} / \text{EMP}_{i,t}) \cdot 100 / \text{TPI}_t$						
<i>Coefficients and key statistics (t-statistic on common variables shown in brackets)</i>						
	R <sup>2</sup>	Durban Watson	a <sub>i</sub>	b <sub>i</sub>	alpha	beta
Agriculture	0.89	2.83	1.91	0.026	0.51	100
Mining	0.57	1.15	2.28	-0.005	(7.23)	(2.14)
Utilities	0.90	1.50	2.11	0.008		
Construction	0.82	1.73	2.31	-0.006		
Manufacturing	0.97	2.27	2.06	0.008		
Wholesale	0.95	1.17	1.94	0.019		
Retail	0.97	1.41	2.07	0.014		
Transportation	0.91	1.46	2.06	0.012		
Information	0.96	1.53	1.96	0.016		
FIRE	0.97	1.24	2.01	0.009		
Professional	0.70	1.15	2.21	-0.003		
Ed & Health	0.38	1.31	2.24	-0.001		
Leisure	0.96	2.34	2.12	0.009		
Other Services	0.91	2.19	2.07	0.012		

<b>Estimation Results: Intermediate inputs intensity measure</b>						
Equation: $\text{Log}(\text{MFP}_{i,t}) = a_i + b_i \cdot \text{TIME} + \alpha \cdot \text{Log}(\text{MFP}_{i,t-1}) + \beta \cdot (\text{BUS\_SPEND}_{i,t} / \text{INT}_{i,t})$						
<i>Coefficients and key statistics (t-statistic on common variables shown in brackets)</i>						
	R <sup>2</sup>	Durban Watson	a <sub>i</sub>	b <sub>i</sub>	alpha	beta
Agriculture	0.89	2.84	1.74	0.024	0.55	5.80
Mining	0.62	1.30	2.08	-0.004	(8.36)	(1.99)
Utilities	0.91	1.53	1.95	0.007		
Construction	0.82	1.76	2.09	-0.006		
Manufacturing	0.97	2.46	1.90	0.008		
Wholesale	0.95	1.30	1.65	0.019		
Retail	0.98	1.62	1.77	0.014		
Transportation	0.91	1.53	1.82	0.012		
Information	0.95	1.32	1.76	0.020		
FIRE	0.98	1.52	1.78	0.009		
Professional	0.75	1.35	1.78	0.000		
Ed & Health	0.36	1.41	1.93	0.000		
Leisure	0.95	2.22	1.87	0.008		
Other Services	0.90	2.19	1.78	0.012		

# 7. Supporting Citations and Quotes

## 7.1. Exhibitions

- It takes an average of 4.5 sales calls to close a sale without an exhibition lead, and only 3.5 sales calls to close a sale with a lead from an exhibition. Source: Center for Exhibition Industry Research, 2009
- Average cost of identifying a potential customer at an exhibition is \$215 vs. \$443 outside of an exhibition. Source: Center for Exhibition Industry Research, 2009
- Exhibitions increase corporate and/or brand recognition. (67% agree or strongly agree.) Source: Center for Exhibition Industry Research, 2009
- Exhibitions assist in gaining/retaining market share. 63% agree or strongly agree. Source: Center for Exhibition Industry Research, 2009
- Overall, 77% of attendees at events are potential new customers for exhibiting companies. 82% have buying authority. Source: CEIR Research Report ACRR 1130.08
- A visitor will spend an average 8.3 hours over 2.3 days visiting exhibits on the show floor. Source: CEIR Research Report ACRR 1154.08
- 82% of visitors are interested in products marketed at exhibits. Source: CEIR 2007 data
- 87% of survey respondents – who were actively familiar with exhibitions and have a role in the overall purchase process for their organizations – stated that national exhibitions are an “extremely useful” source of needed purchasing information. Source: CEIR Research Report PE 1.03 2004
- 89% say that exhibitions keep them up-to-date on the latest trends and developments in their industry 88% say that exhibitions save company time by bringing many vendors under one roof at the same time
- 86% say exhibitions help their company make decisions about what products/services to buy 84% say exhibitions provide an opportunity to discuss problems/ideas with professionals in their industry
- 83% say they rely on exhibitions to keep up on important trends and new developments
- 62% say exhibitions actually save their company money by bringing many vendors under one roof at the same time. Source: CEIR Research report PE 2.03 2004
- Exhibitors plan to attend fewer shows in 2009. They went to an average of 30 trade shows in 2008, but expect to only go to 25 shows in 2009. And they will be spending less. Budgets for exhibiting will decrease from an average \$459,100 in 2008 to \$381,000 in 2009. This is a 17% decline in spending. Budgets for technology trade shows look particularly vulnerable showing a 46% decline in spending from \$615,400 to \$332,000. Source: 2009 TSEA Exhibit Management Survey Analysis, February 2009
- Budgets for corporate private events are showing an anticipated 30% decline from \$207,600 in 2008 to \$145,500 in 2009. This is almost twice the decline in spending that is being seen for trade shows. Source: 2009 TSEA Exhibit Management Survey Analysis, February 2009

## 7.2. Incentives

- In performance improvement programs, non-cash rewards are two to three times more effective than cash rewards. Source: Study by Scott Jeffrey, Ph.D., described in “Right Answer, Wrong Questions” from September 2004 Issue of SalesForceXP . Also supported by People, Performance and Pay, O’Dell and McAdams, and The Compensation Handbook. Cited by Maritz
- The two main reasons for this difference are rooted in human nature. It’s just the way our brains work. People are able to visualize and remember tangible items better than cash, and therefore stay more actively engaged with program goals and objectives. Source: Study by Scott Jeffrey Ph.D., described in presentation given at the 2007 Incentive Summit “From Art to Science: Why Tangible Non-Cash Rewards Are More Rewarding for You and Your Participants.” Cited by Maritz
- They’re also more emotionally involved and willing to work harder for something perceived as a luxury item, rather than cash or a more practical reward. This is true even though the luxury item may cost less. Source: Study by Ran Kivetz, Associate Professor of Marketing at Columbia University Graduate School of Business, described in “Lock in On Luxuries” from September 2005 issue of SalesForceXP. Cited by Maritz
- Studies show that while cash is important in the total rewards mix, as are benefits, it takes three times more cash than merchandise to drive the same results. Source: Study by Scott Jeffrey Ph.D., described in presentation given at the 2007 Incentive Summit “From Art to Science: Why Tangible Non-Cash Rewards Are More Rewarding for You and Your Participants.” Cited by Maritz
- Of different forms of incentives, travel has been the most affected by the economic downturn with 81% citing a negative effect on travel incentives. Source: Incentive Research Foundation Pulse Survey, 2009
- In 2006, the market for Incentive Travel, Motivational Meetings and Special Events was \$77.1 billion. Source: Incentive Research Foundation
- 85% of management view incentive travel as an investment. 81% are sales incentives. Source: Incentive Research Foundation
- Objectives of incentive travel: 96% to sell more; Morale: 71%; Productivity: 67%; employee satisfaction: 64%; retain staff: 57%; teamwork: 53%. Source: Incentive Research Foundation
- Individual incentives resulted in a 27% improvement in performance and team incentives increased performance by 45%. Source: Incentives, Motivation, and Workplace Performance: Research and Best Practices, 2002 Incentive Research Foundation

### 7.3. Business Travel

- 71% of travel managers will spend less on business travel this year, 21% expect to travel the same, and 8% more. Hardest hit is internal. Source: ACTE Business Travel Spend Survey. February 2009
- 56% of corporate planners reported cancelling one or more meetings or incentive trips this year. Source: Meetings and Conventions Magazine.
- During the first two months of 2009, the U.S. lodging industry lost more than \$1 billion in revenue from the cancellation of corporate meetings and events. Source: U.S. Travel Association
- The 2009 TSEA Exhibit Management Survey Analysis anticipates a 30% decline in corporate budgets for private events
- “Give many high-end white collar workers a 3G iPhone or BlackBerry and they can pretty much do their entire job from anywhere in the world. But in the end, business is all about trust, and that still requires face-to-face encounters.” Source: Brookings.edu, “What Happens in Vegas...Stimulates the Economy”
- “Tough times are a great time to renew trust. When customers and employees see the leadership team standing front and center and delivering the message, it demonstrates that management cares about them and considers them essential to weathering the storm. Cancelling such meetings, except when there are no other alternatives, sends the message that employees and even vendors and customers are expendable.” Source: John Baldoni, author and publisher on Harvard Business Publishing’s Leadership blog Leadership Matter
- Source: survey commissioned by the U.S. Travel Association, and conducted by the Kellogg School of Management. Telephone and web-based interviews of 401 business executives were conducted from February 3-18, with a margin of error of + 5 percentage points. The survey of business executives at companies with more than \$50 million in annual sales found that:
  - 82 percent of companies surveyed believe that business travel is important to achieving their business results;
  - 81 percent believe that more client contact is necessary in a slow economy;
  - A strong majority (59 percent) strongly agree that in-person contact grows their business; and
  - 72 percent of businesses believe that increasing travel while others are cutting back creates an opportunity to build market share and new customer relationships.
  - Half (51%) of the nation’s businesses have made cuts to their travel budget in recent months. Some have completely or nearly eliminated their travel budgets and as many as one-in-five (23%) have slashed their budgets by more than half.
  - Companies acknowledge that cutting travel may be a necessity in an economic downturn and are making these cuts to try to save employee’s jobs and salaries.
  - Yet, top executives worry about the long-term costs of these short-term savings. Nearly all businesses (82%) say travel is important to producing positive results for their organization. What is more, a third (31%) of executives at businesses where cuts have been made think cuts to travel budgets will have a negative effect on the company’s bottom line.
  - In fact, large majorities of all companies surveyed say face-to-face interactions are key to growing relationships with clients (88%) and a slow economy calls for

increased contact with current and potential customers, not less (81%). Half (47%) believe that cuts in corporate travel in an economic downturn will leave a company ill prepared to seize opportunities when the economy turns around.

- At the same time, companies think other's travel cuts may work to their advantage. Roughly three-quarters (72%) of businesses surveyed say that increasing travel while others are cutting back creates an opportunity to build market share and new customer relationships.
- "In their book, *Contented Cows Give Better Milk*, Bill Catlette and Richard Hadden compared business results of companies considered employers of choice with a comparable group of Fortune 500 companies. (An employer of choice is a company that is primarily people-driven.) Although the Employers of Choice had about 1/3 of the revenue of the others at the start of the study, over a 10-year period (one that included a recession), they:
  - Outperformed the latter about four to one in revenues,
  - Increased net income by 202% vs. 139%,
  - Roughly doubled the net income of the latter group, and
  - Added 79,000 jobs while the latter LOST 61,000 jobs.
  - The point: simply that a motivated, committed work force — one that continues to be recognized by incentive programs that reward excellent performance — continues to achieve growth while others stagnate.
- 69% of meetings attendees consider in-person networking to be "very of extremely important" to their job performance. Source: CEIR "The Role and Value of Face-to-Face Interaction 2004"
- **Meetings benefits:**
  - 53% of sales and marketing respondents said event marketing offered twice the benefit to relationships than PR. Source: EventView 2009
  - ROI: meetings the best driver of ROI with 26%, beating out web marketing (20%), direct mail (13%), and print ad (15%). Source: EventView 2009
  - Branding: 61% of marketers consider face-to-face exhibiting as the most effective means to build a brand image. Forrester Consulting Services on behalf of American Business Media, 2007
- Responsible, well-designed and well-executed meetings and training sessions have been shown to yield significant benefits, including improved company culture, increased employee retention, and more highly engaged and satisfied employees. According to a 2008 study by the Wharton School of the University of Pennsylvania, "companies with satisfied employees generate better overall returns in the stock market, with firms on the list of '100 Best Companies to Work For' generating up to five times as much return as their competitors."
- Meetings and events are strategic tools that deepen employee relationships and contribute to the overall health of companies. A 5% increase in employee retention can generate a 25 to 85% increase in profitability. Source: "Putting the Service-Profit Chain to Work," Heskett, James L., Jones, Thomas O., Loveman, Gary W., Sasser, W. Earl, and Schlesinger, Leonard A., Harvard Business Review, March/April 1994.
- The MPI Foundation/George P. Johnson EventView study reveals that Fortune 1000 Chief Marketing Officers view meetings and events as having the highest ROI of any marketing channel.

# 8. Survey Descriptions

## 8.1. Methodology For Executives Survey

The survey with corporate executives was conducted between May 4 – May 8, 2009 among a random sample of members of LinkedIn. A total of 300 interviews were completed among LinkedIn members with one of the following titles: VP, SVP, EVP, Chief Officer or Managing Director. The margin of error is  $\pm 5\%$ . The business executives survey covered the following topics:

- Types of overnight business travel taken by employees at firm
- Future spending on employee business travel at firm
- Percent of total company/department expenses spent on T & E, conference and convention fees, and related exhibitions and sponsorships
- Impact of business travel spending on gross revenue, overall profitability, and employee productivity
- Estimated return on money spent on business travel related activities

## 8.2. Methodology For Business Traveler Survey

The survey with business travelers was conducted among pre-screened business travelers from Synovate's US online consumer panel. A total of

500 online surveys were completed. Respondents were between the ages of 25-65, currently employed, and must have traveled for business in the past 12 months for the purpose of internal company meetings, conferences, or training, client meetings, external conferences, conventions, or trade shows, or as an incentive for good performance.

The survey was designed to address the key objectives for the study and ROI estimation information. They include:

- Types and frequency of business trips
- Impact of in-person customer/client meetings on new business, sales, and current customers
- Opinion on effectiveness of web meetings and teleconferences
- Opinion, frequency, and impact of internal company meetings, conferences, and/or training seminars
- Purpose, frequency, and impact of external conferences or conventions
- Purpose, frequency, and impact of external trade shows or trade exhibitions
- Return on investment of external trade shows or trade exhibitions
- Impact of incentive trips



# OXFORD ECONOMICS

## About Oxford Economics

Oxford Economics is one of the world's leading providers of economic analysis, forecasts and consulting advice. Founded in 1981 as a joint venture with Oxford University's business college, Oxford Economics enjoys a reputation for high quality, quantitative analysis and evidence-based advice. For this, it draws on its own staff of 50 highly-experienced professional economists; a dedicated data analysis team; global modeling tools, and a range of partner institutions in Europe, the US and in the United Nations Project Link. Oxford Economics has offices in Philadelphia, London, Oxford and Belfast.

This study was conducted by Oxford Economics USA and its partner company, Tourism Economics. Tourism Economics combines an understanding of travel dynamics with rigorous economics in order to answer the most important questions facing destinations, developers, and strategic planners. By combining quantitative methods with industry knowledge, Tourism Economics designs custom market strategies, destination recovery plans, tourism forecasting models, policy analysis, and economic impact studies.

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## About The U.S. Travel Association

The U.S. Travel Association is the national, non-profit organization representing all components of the \$770 billion travel industry. U.S. Travel's mission is to promote and facilitate increased travel to and within the United States. For more information, visit [www.ustravel.org](http://www.ustravel.org).



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