

TOURISM ECONOMICS

The Economic Impact of Sonoma Valley's Tourism Industry

Proposal prepared for:

Sonoma Valley Visitors Bureau

Presented by:



**TOURISM
ECONOMICS**

AN OXFORD ECONOMICS COMPANY

Contents

1	Executive Summary	3
2	Project Approach.....	4
2.1	Compile diverse data sets to measure visitor expenditures.....	4
2.2	Develop impact analysis.....	6
2.3	Presentation of Results	9
3	Project Terms	10
3.1	Schedule.....	10
3.2	Costs	10
4	Experience and Qualifications	11
4.1	Overview.....	11
4.2	Key factors underpinning Tourism Economics' work	12
4.3	Project experience.....	12
4.4	References	16
4.5	Testimonials	17
4.6	Project Team	18
5	Agreement	22

1 Executive Summary

Visitors represent an integral part of the Sonoma Valley economy. Visitor spending generates substantial tax receipts to local municipalities and the tourism sector's broad range of job creation provides a vital economic foundation to the region.

By monitoring the visitor economy, the Sonoma Valley Visitors Bureau can inform decisions regarding the funding and prioritization of the sector's development. It can also carefully monitor its successes and future needs.

Economic impact analysis enables this sort of tracking because it measures the visitor economy in the categories that allow it to be compared to other sectors and which matter to policy makers. These categories include tax generation, employment, wages, and business sales.

Tourism Economics, an Oxford Economics company, is pleased to submit this proposal to serve these purposes by assessing the economic importance of tourism to the Sonoma Valley. The result of our analysis will be a compelling and detailed document which *quantifies* and *explains* the economic value of tourism to Sonoma Valley in detail. The report will monitor changes in the significance in the visitor economy and the importance of the tourism sector relative to other economic sectors. In addition, the report will depict the value of tourism to both households and to the public sector. The analysis will provide substantial detail, comprehensiveness, and policy relevance.

Our team brings together a strong complement of leadership, industry experience, and technical expertise for this project. We have conducted over two-hundred economic impact studies and/or visitor projection models for developers, tourism associations, CVBs, state tourism offices, and national tourism offices across every region of the world. Our commitment is to provide an economic impact assessment that is credible, comprehensive, and clear.

Thank you for this opportunity. We would be pleased to support the Sonoma Valley Visitors Bureau with this important project.

2 Project Approach

Our approach is built with three objectives in mind:

- Credibility—analysis will be grounded in consistency with government-reported data and based on a variety of data sources
- Comprehensiveness—the incorporation of a broad range of data sources will ensure that the entire visitor economy is quantified
- Clarity—results will be communicated to maximize relevance to stakeholders

To meet these objectives, the Tourism Economics team will take the following steps in the development of the tourism economic impact analysis for Sonoma Valley.

2.1 Compile diverse data sets to measure visitor expenditures

The analysis will begin with a compilation of all relevant data sets as inputs to the model. The visitor economy spans many different activities and sectors so a number of perspectives must be brought together to quantify each component of the tourism economy.

We will use these different measurements to complement and to cross-check one another:

- Visa data on cardholders and transaction value for domestic and international visitors.
- Employment (NAICS 700+ industries, source: BEA and BLS) – by industry
- Wages (NAICS 700+ industries, source: BEA and BLS) – by industry
- Lodging performance data (Smith Travel Research)
- Tax receipts by industry (sales tax and lodging tax) – by industry
- US Census data on seasonal second homes by county (to measure imputed rent and related spending)
- US Census data on business sales by industry
- National Travel & Tourism Organization (NTTO) data on international overseas inbound traveler visits and expenditures
- Statistics Canada data on visits and related spending
- Aviation-related spending for visitors based on airport and passenger data

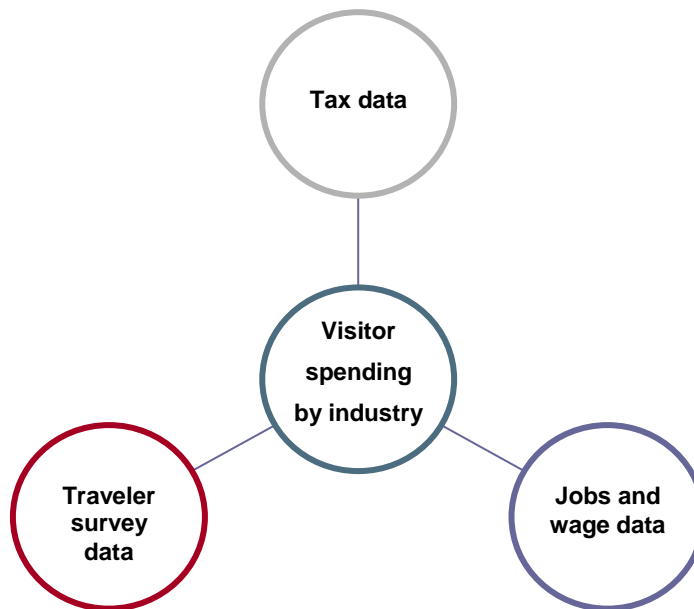
- Winery data as available from local trade association
- Historic visitor survey data

This comprehensive set of data will provide a holistic view of visitor activity that is constrained by known measurements. For example:

1. Tax receipts data by industry will provide measurements of revenue for industries providing tourism goods and services.
2. This will be compared to spending estimates derived from syndicated visitor expenditure estimates (Longwoods).
3. This will further be compared to employment and wage data by industry to cross-check the total size of each related industry and the implicit share of tourism for each industry.

This “triangulation” approach provides a set of anchors so that the end results are consistent and credible.

Example of data cross-check method



Syndicated visitor spending data will break down visitor expenditures by type for determining the tourism share of sectors which are only partially tourism-related such as restaurants. BEA employment data will provide an overarching perspective

on the total jobs (whether or not generated by tourism) within each tourism-related sector. This will be used as a reasonableness check of the economic model results.

Using these diverse and complementary datasets, we will quantify total visitor expenditures by industry for the year 2016. A historic trend of visitor spending and employment will be developed for the past five years.

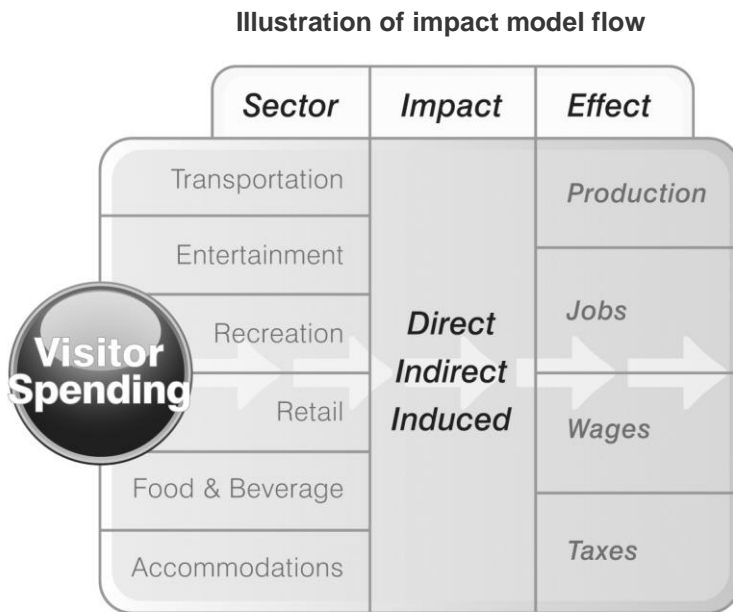
2.2 Develop impact analysis

Our team will then employ an Input-Output (I-O) model for the combined county set for the Sonoma Valley based on an IMPLAN (www.implan.com) model. IMPLAN is recognized as one of two industry standards in local-level I-O models. An I-O model represents a profile of an economy by measuring the relationships among industries and consumers. For example, an I-O model tracks the flow of a visitor's restaurant expenditures to wages, profits, capital, taxes and suppliers. The supplier chain is also traced to food wholesalers, to farmers, and so on. In this way, the I-O model allows for the measurement of the direct and indirect sales generated by a restaurant meal. The model also calculates the induced impacts of tourism. These induced impacts represent benefits to the economy as employees of tourism sectors spend their wages in the local economy, generating additional output, jobs, taxes, and wages.

IMPLAN is particularly effective because it calculates these three levels of impact – direct, indirect, and induced – for a broad set of indicators. These include the following:

- Business sales (also called gross output)
- Wages
- Employment
- Federal Taxes
- State and Local Taxes by type

The modeling process begins with aligning the tourism expenditure measurements with the related sectors in the model (e.g. restaurants, retail, recreation). The model is then run to simulate the flow of these expenditures through the economy. In this process, the inter-relationships between consumers and industries generate each level of impact for each economic indicator (sales, wages, employment, etc.).



Tourism Economics will then iteratively adjust the model to balance the results with known industry measurements. IMPLAN is flexible, allowing for adjustments in coefficients. This ensures that the results of the model are consistent and reasonable compared with other sources of specific tourism sector employment and taxes.

Figures will be segmented by industry—including those industries which benefit indirectly. This will provide valuable insights into how various industries benefit from visitor activity.

A detailed tax analysis will combine IMPLAN output with bottom-up calculations of sales taxes, bed taxes, and other tourism-specific taxes to complement the standard model results. Tax impacts will include the following detailed line items.

- Federal Taxes
 - Corporate
 - Indirect Business
 - Personal Income
 - Social Security

State Taxes

- Corporate
- Personal Income
- Sales
- State Unemployment
- Dividends
- Other taxes and fees

Local Taxes

- Sales
- Property
- Lodging
- Amusement
- Excise and Fees
- Personal Income

In addition to the absolute value of taxes, these will be expressed as “savings in state and local taxes per household” based on the assumption that were it not for visitors, resident households would need to fund these revenues.

Jobs, income, and total business sales figures will be presented in terms of their share of the Sonoma Valley economy and direct impacts will be ranked against other industries in Sonoma Valley.

2.3 Presentation of Results

Even the best research is only as good as its presentation. The Tourism Economics team will develop a clear and graphical presentation of the results with narrative explaining the concepts and their importance. The report will be accessible to the layperson with a view towards a diverse set of audiences including market analysts, legislators, the media, planners, and other stakeholders.

The results of this analysis are grouped into four main areas:

- Size—the magnitude of impact will be quantified in terms of spend, business sales impact, employment, wages, and taxes. Our analysis ensures that all activities are measured, including spending in the vacation ownership, seasonal real estate, aviation and local transport, hospitality, recreation, retail, and restaurant sectors.
- Segmentation—the analysis will then segment the impacts by industry (for seventeen sectors), and level of impact (direct, indirect, and induced).
- Context—large numbers are more meaningful if given context. Tourism Economics reports provide this in two ways. The first is by calculating the share of the economy (wages, jobs, sales, and taxes) attributable to visitors. The second is through a series of creative comparisons of tax, wage, and job impacts with the size of government budgets, impact per minute, and sports venues. For example:
 - Visitor-generated taxes would fund the entire (public school system, police department...) X times over
 - The jobs created by visitor spending would fill X
 - Visitors to the Sonoma Valley generate more jobs than the X, Y, and Z industries combined

Our proven competitive advantage is the ability to communicate complex information in a way that is understandable, relevant, and interesting.

The key outputs from Tourism Economics for this project will be:

- Report of findings
- A description of data inputs and methodology
- Assistance with the development of press releases and a webinar presentation to stakeholders

The report is a compendium of charts and tables, summarizing the key data.

3 Project Terms

3.1 Schedule

Tourism Economics will meet a six-week time table for the project.

- Weeks 1-2: Compile all third party data from government and other third party sources.
- Weeks 3-4: Develop spending estimates and impact models.
- Weeks 4-6: Deliver reports and data. Finalize deliverables.

3.2 Costs

The economic impact analysis and volume reporting can be delivered at a fixed-fee of \$22,500.

Our typical payment schedule is 50% upon contracting, 25% upon draft report delivery, and 25% upon satisfactory completion of the project

4 Experience and Qualifications

4.1 Overview

Tourism Economics LLC is an Oxford Economics company with a singular objective: combine an understanding of tourism 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, tourism policy analysis, and economic impact studies.

With over six decades of experience of our principal consultants, it is our passion to work as partners with our clients to achieve a destination's full potential. Our team of 15 economists is focused exclusively on the interplay between the travel industry and the economy. The firm was formed ten years ago in partnership with Oxford Economics.

Oxford Economics was founded in 1981 as a commercial venture with Oxford University's business college to provide economic forecasting and modelling to UK companies and financial institutions expanding abroad. Since then, we have become one of the world's foremost independent global advisory firms, providing reports, forecasts and analytical tools on 200 countries, 100 industrial sectors and over 3,000 cities. Our best-of-class global economic and industry models and analytical tools give us an unparalleled ability to forecast external market trends and assess their economic, social and business impact.

Headquartered in Oxford, England, with regional centers in London, New York, and Singapore, Oxford Economics has offices across the globe in Belfast, Chicago, Dubai, Miami, Milan, Paris, Philadelphia, San Francisco, and Washington DC. We employ over 250 full-time staff, including 150 professional economists, industry experts and business editors—one of the largest teams of macroeconomists and thought leadership specialists. Our global team is highly skilled in a full range of research techniques and thought leadership capabilities, from econometric modelling, scenario framing, and economic impact analysis to market surveys, case studies, expert panels, and web analytics. Underpinning our in-house expertise is a contributor network of over 500 economists, analysts and journalists around the world and our heritage with Oxford University and the academic community.

Oxford Economics is a key adviser to corporate, financial and government decision-makers and thought leaders. Our worldwide client base now comprises over 1,000 international organizations, including leading multinational companies and financial institutions; key government bodies and trade associations; and top universities, consultancies, and think tanks.

Tourism Economics has a full-time team of 15 and has been in business for ten years. Our DUNS number is 961676025. Contact details and location of all work to be performed under this proposal are below:

Adam Sacks

President | Tourism Economics

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Wayne PA 19087

+1.610.995.9401 office

www.tourismeconomics.com / adam@tourismeconomics.com

4.2 Key factors underpinning Tourism Economics' work

Travel industry expertise

Tourism Economics has vast experience in providing actionable and credible analysis of travel activity. Our combined team has substantial direct hands-on experience in destination visitor economic impact.

Economic and tourism databases

Our global tourism databases of origin-destination visitor flows and spending has the best country, city, and indicator coverage of any private sector provider through our partnerships with the UNWTO, PATA, and the CTO along with our internal updates of the most recent trends. The Oxford Economics global model covers 190 countries and 3,000 cities and is updated constantly by our data team in Oxford.

Senior staffing

Tourism Economics operates as a boutique tourism consulting company in one important sense: we assign senior staff at the center of each and every project. Our project directors are integrally involved in every stage of work and are directly involved in its development. The principals who represent our work are the same who conduct the work. We have found this to be an optimal way to sustain high quality and maintain close relationships with our clients. It is also the way we enjoy working.

4.3 Project experience

Tourism Economics staff have been conducting relevant economic impact analysis for twenty years. Tourism Economics has been in business for ten years.

Scope: Economic Impact of Tourism

Client: 17 states, 200+ cities, 20+ countries

Description: Tourism Economics regularly updates analysis for governments seeking to understand the economic contribution of tourism activity on their city, state, or country. Past US state experience of the TE team includes: North Carolina, Kansas, Connecticut, South Carolina, Delaware, New Jersey, New York, Florida, Pennsylvania, Michigan, Minnesota, Missouri, New Mexico, North Dakota, Ohio, South Dakota, Wisconsin, Maryland, and Georgia. (Underlined states are current clients.) We have conducted Tourism Satellite Account analysis for seven states and over twenty countries worldwide. We also conduct global TSA summary analysis for more than 150 countries in support of the World Travel & Tourism Council.

Public examples of our work include:

<http://www.visitnj.org/new-jersey-tourism-research-and-information>

<http://www.visitpa.com/economic-impact-travel-report>

<http://www.wttc.org/research/>

<http://industry.visitmo.com/Portals/1/FY13%20Economic%20Impact%20%20Exec%20Summary.pdf>

Scope: Economic Impact of Events

Clients: 175 DMOs/State Tourism Offices across the US

The DMAI Event Impact Calculator is an online economic impact analysis tool designed by Tourism Economics for CVBs to calculate the economic value of trade shows, conferences, and other events on their destination. The platform is the established industry standard for economic impact analysis among CVBs.

<http://www.destinationmarketing.org/topics/event-impact-calculator>

Scope: Economic Impact of Business Travel

Client: U.S. Travel Association / World Travel & Tourism Council

Tourism Economics quantified the economic impact of business travel on overall corporate and national economic performance for the US and for each world region.

Scope: Effectiveness of the San Diego CVB (Similar research conducted for Brand USA, Discover Los Angeles, and Lancaster County CVB)

Client: San Diego Tourism Marketing District

Description: Tourism Economics assessed all of the SDCVB marketing and promotion activities to determine the magnitude of their impact. We then looked at the ROI of the overall program and the distribution of benefits across industry stakeholders.

Scope: Funding scenarios

Client: Destination DC, Los Angeles TCB, Coronado CVB, Colorado Springs, Visit Britain, Canadian Tourism Commission, Visit California, Experience Columbus

Description: For each of the above organizations, Tourism Economics conducted separate scenario analysis of increased funding and its potential impact on visitation, spending, and economic activity. These analyses were based on models of future performance with respect to past campaign ROI for each of the destinations of a variety of origin markets.

Scope: Visitor Opportunity Market Assessment

Client: Visit Britain, Netherlands Tourism, NYC & Company, Visit Orlando, Visit Sweden, PromPeru, Visit California, Visit Florida

Description: A Market Analysis Platform (MAP) was developed for the client that ranked the relative strengths and weaknesses of a broad array of international markets. The MAP combined a wealth of economic forecasts and other relevant indicators for each market to determine a series of scores for each market according to factors such as market size, opportunity, alignment, risk and constraint. By combining the scores for each of these factors the relative attractiveness of each origin market can be determined to inform

how a marketing budget can be allocated across the markets. This platform allows flexibility in which markets are analyzed and compared as well as in which factors are considered to be important in determining relative opportunity.

Scope: Return on Investment Model for Canada

Client: Canadian Tourism Commission (CTC), Atlantic Canada, Travel Alberta

Description: Tourism Economics added to existing CTC research on the allocation of marketing investment across key overseas origin markets. Whereas previous analysis had focused on market opportunities, we widened the scope to consider market risks and constraints. Return on investment multiples were estimated for each market based upon existing conversion studies and other measures of opportunity. These were combined with estimated risk values for each market using optimal portfolio analysis. Multiple combinations of allocating marketing investment were compared and the optimal portfolios which deliver the highest estimated return for a given risk threshold were calculated.

Scope: Visa Waiver Program expansion analysis

Client: U.S. Travel Association

Description: Tourism Economics developed a model based on historical benefits of the Visa Waiver Program to evaluate the likely gains that would be realized through expanding the eligibility criteria to include 10 new countries.

Scope: The economic impact of visas impeding participation in US exhibitions

Client: The Center for Exhibition Industry Research

Description: Tourism Economics assessed the broad economic losses of non-participation in US-based exhibitions as a result of visitor visa issues. This analysis quantified two broad categories of US export losses from business-to-business (B2B) trade shows (exhibitions). 1) Foregone spending by would-be attendees—affecting international demand for hospitality services as well as a wide range of spending at the event itself. (These are measured as service exports in balance of trade measures). 2) Lost exports of US companies who are unable to meet with current or potential prospects.

Scope: Economic impact of tourism and the I Love New York campaign

Client: New York Association of Convention and Visitors Bureaus

Description: Tourism Economics developed a county-by-county tourism economic impact model to measure visitor spending, and related jobs, wages, and taxes. The model quantified tourism value added across each affected industry. We then quantified the impact of the I Love New York campaign across the same metrics using the output of a separate marketing conversion study.

Scope: US Domestic Tourism Forecasting

Client: US Travel Association

Description: US Travel has provided forecasts of domestic travel to the industry at large for over a decade. Tourism Economics was approached to construct a new model of US domestic tourism to generate these forecasts. This model separately tracks and forecasts travel flows according to market segment (business, leisure), mode of transportation and trip length (day, overnight). The model considers domestic travel relative to international travel and also considers substitution between these different types of domestic trips. Key model drivers are forecasts taken from Oxford Economics' US macroeconomic model as well as the TIA travel price index.

Scope: Hotel market forecasts

Client: Smith Travel Research

Description: Tourism Economics is STR's forecast partner, developing market-level forecasts of hotel demand, supply, ADR, occupancy, and RevPAR for over 70 markets worldwide.

Scope: State of California Tourism Forecasting

Client: California Travel & Tourism Commission

Description: Tourism Economics conducts periodic forecasts of travel demand for the state of California. These forecasts and related analysis include domestic and international market detail.

Scope: Miami Tourism Forecasting

Client: Miami CVB

Description: Tourism Economics conducts periodic forecasts of travel demand for Miami. These forecasts and related analysis include domestic and international market detail.

Scope: Orlando Tourism Forecasting

Client: Visit Orlando

Description: Tourism Economics conducts periodic forecasts of travel demand for Orlando. These forecasts and related analysis include domestic and international market detail.

4.4 References

We are pleased to provide the following references. We encourage you to contact these individuals with any questions you may have.

Client: State of New Jersey
Anthony Minick, Director
Scope: Tourism economic impact, state and counties / 7 years
609 292 2497
Anthony.Minick@sos.nj.gov

Client: MISSOURI DIVISION OF TOURISM
DEE ANN MCKINNEY, Research Director
Scope: Tourism economic impact, state and counties / 3 years
(573) 526-1553
DeeAnn.Mckinney@ded.mo.gov

Client: Pennsylvania Tourism Office
Scope: Tourism economic impact, state and counties / 8 years
Elizabeth Sechoka, Director Research & Statistics
(717) 720-1308
esechoka@STATE.PA.US

Client: Destination Marketing Association International
Scope: Event Impact Analysis (150+ cities in the US) / 4 years
Christine “Shimo” Shimasaki, CDME, CMP
858-935-9179 (San Diego)
202-835-4094 (Washington DC)
shimo@destinationmarketing.org

Client: NYC & Company
Scope: Economic impact, tourism forecasting, and volume tracking / 10 years
Donna J. Keren, Ph.D., Senior Vice President, Research & Analysis
(212) 484-221
dkeren@nycvisit.com

Client: Empire State Development
Scope: New York State tourism economic impact, state and counties / 9 years
Bob Miron
(518) 292-5305
rmiron@esd.ny.gov

4.5 Testimonials

“Tourism Economics’ reputation for excellence is well-deserved. We are confident our forecast product will be an invaluable tool set for decision makers during this budgeting season and beyond.”

BRAD GARNER
Chief Operating Officer, STR

“As always, T.E. was a hit! They have a remarkable ability to make economic trends digestible, even to those who insist they don’t understand economics.”

BERKELEY W. YOUNG
President, Young Strategies, Inc.

“Their reports are consistently informative, easy to interpret and apply, and defensible to various stakeholders. Their responsiveness to questions and professional demeanor ensure satisfaction among all our industry members.”

AMIR EYLON
Director, Ohio Tourism Division

“What differentiates TE from any other partner I work with is their desire to truly understand our issues and opportunities of our industry, the open conversations, the trust that is established to find sustainable solutions.

CHRISTINE “SHIMO” SHIMASAKI, CDME, CMP
Destination Marketing Association International

“One of the unique benefits of working with Tourism Economics is the true global and macro-economic environment in which they analyze our travel and tourism performance. Understanding how this industry is integral to the global economy is fundamental to what we think and do on the local level.”

DONNA KEREN, PH.D.
Senior Vice President, Research NYC & Company.

“They are incredibly responsive to requests for support and have gone out of their way to help with last minute queries.”

PETER NASH
Head of Strategy Development & Insights, Tourism Ireland

“Our success in informing national travel policy has been linked to T.E. analysis.”

GEOFFREY FREEMAN
Executive Vice President, U.S. Travel Association

“Thank you for the excellent work you performed in terms of the degree of analysis, and especially the recommendations flowing from them. We went well beyond the initial agreed scope and your assessment was quite useful to us.”

DAVID JOHNSON

Director-General, Bahamas Ministry of Tourism

"The Tourism Economics team is a pleasure to work with on projects. They are always willing to talk through different approaches or perspectives to solving problems."

CANDICE SNOOK

Manager, Performance Strategy & Planning, InterContinental Hotels Group

4.6 Project Team

Given the importance of this project—both to the client and to Tourism Economics—the project will be directed by Adam Sacks, President of Tourism Economics. Adam will be ultimately responsible for client satisfaction and will be the first point of contact with the client. His involvement will be integral at every stage of the project, from inception to final presentation to model support.

The project's day-to-day management will be handled by Christopher Pike, Director of Impact Studies. Chris will be supported by Michael Mariano and Zachary Sears on data compilation and model development.

Adam Sacks – President, Tourism Economics

Adam Sacks is the President of Tourism Economics; an Oxford Economics company dedicated to analytically-based consulting to the tourism sector. Adam led the travel & tourism consulting division of IHS Global Insight for ten years before starting Tourism Economics in 2005.

Over the past twenty years, Adam has worked with hundreds of travel sector clients to address fundamental economic questions.

On the public sector side, Adam has worked with national, provincial/state and local tourism offices throughout the world. He is an authority on measuring the economic impact of tourism activity—both broadly and for specific initiatives and projects. He has advised destinations on tourism investment policy, the effects of proposed entry procedures, tourism taxation, and marketing strategies. He has provided numerous destinations with analysis on market positioning and emerging opportunities.

Adam has consulted with multi-national hotel chains, airlines, aircraft manufacturers, theme parks, resort developers, and retail operators to measure current and future market opportunities. He has presented to numerous corporate strategic planning teams on the threats and opportunities facing their businesses within the projected travel and economic climate.

He is an expert in developing custom systems for quantifying relevant tourism market segments and tracking the competitive landscape for clients. Adam has developed tourism forecasting models with unrivalled track records.

Adam has implemented the UN-sanctioned TSA methodology for measuring the economic impact of tourism for over a dozen countries and for seven states in the US.

Adam is a compelling and sought-after speaker on issues related to tourism market analysis, the economic impact of tourism and travel-demand forecasting. He also has presented tourism impact results to governments around the world. Adam is a member of the US Department of Commerce Travel & Tourism Advisory Board. Adam will oversee methodology, review all results, and ensure client satisfaction.

Chris Pike – Director of Impact Studies, Tourism Economics

Christopher Pike has 20 years of experience as a professional economist with the last 15 focused on the tourism sector. Chris is responsible for measuring the economic impact of tourism activity – both broadly and for specific initiatives and projects – and has worked with dozens of state and local tourism offices. Chris manages a series of ongoing consultancy projects related to the tourist sector, including forecast and impact studies for DMAI, the U.S. Travel Association, and DMOs across the country.

Chris worked in the travel & tourism consulting division of IHS Global Insight for five years before joining Tourism Economics in 2010. Chris received his Master's in International Trade and Public Economics from the University of Pennsylvania. Chris will manage day-to-day project work and act as primary model developer.

Michael Mariano – Senior Economist and Director of Geospatial Analytics

Michael Mariano is a Director with Tourism Economics and Oxford Economics. Michael has over 15 years of experience in economic and statistical consulting, and his research interests include economic and fiscal impact modeling, econometric forecasting, retail market studies, and GIS (Geographic Information Systems) modeling and geospatial analytics.

Mr. Mariano has consulted and provided expert testimony for various public, private, and non-profit clients and has managed projects examining public housing, economic development, tax policy, market analysis, and real estate impacts. He has worked on economic impact studies for hotels, casinos, and retail parks nationwide and has extensive experience providing job impact estimates for project funding through the U.S. government's EB-5 immigrant investor program.

Prior to joining Tourism Economics, Michael was Managing Director of Geospatial Analytics and GIS Solutions at Econsult Corporation, an economic consulting firm based in Philadelphia. Michael received a Bachelor of Science in economics and marketing from the Wharton School and a Master of Science in Urban Spatial Analytics from The University of Pennsylvania.

Michael will work on data compilation and provide modeling support.

Zachary Sears – Director

Zachary has eight years of experience as a professional experience with the last five focused on the travel industry. Zach joined Tourism Economics from Moody's Analytics where he worked as a regional and industry analyst. At Moody's Analytics, Zachary performed regional analysis for U.S. and metropolitan areas and a broad range of industry analysis. His responsibilities included writing regular updates for subscription-based products, conducting econometric modeling, input-output impact modeling, report editing, and consulting services to public and private sector clients. Prior to his roles at Moody's Analytics, he worked as a Research Economist for a Vermont-based economics consulting firm, Economic & Policy Resources, Inc. At EPR he served as a consulting economist for the Governor's Administration and on numerous impact studies covering most industries of the economy. Zachary holds a BA in Justice from American University in Washington, DC, an MA in International Relations from Saint Mary's University in San Antonio, TX, and an MS in Community Development and Applied Economics from the University of Vermont.

Zachary will work on data compilation and provide modeling support.

Public examples of work

Client: **American Gaming Association**

Scope: [Economic impact of casinos at the US national, state, and congressional district levels](#)

Year(s): 2014, 2015

Client: **ARDA International Foundation (AIF)**

Scope: [Economic impact of global timeshare industry for 100 countries](#)

Year(s): 2012, 2016

Client: **U.S. Travel Association**

Scope: Economic impact of unused vacation time at the national and state levels, including impacts on [households](#), [corporate performance](#), and the [broader economy](#) (each link is to a separate study)

Year(s): 2014, 2015, 2016

Client: **Brand USA**

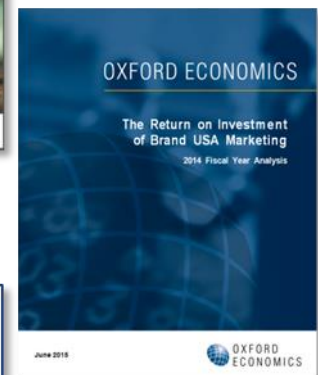
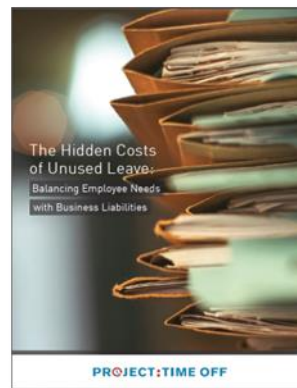
Scope: [Economic impact of global marketing on travel to the US](#)

Year(s): 2014, 2015, 2016 (pending)

Client: **Google**

Scope: [The impact of online content on European Tourism](#)

Year(s): 2014, 2016



5 Agreement

1. Deliverables

1.1 Analysis of the economic impact of tourism to Sonoma Valley

2. Project schedule

2.1 The reports will be delivered in six weeks, assuming no delays in contracting or data inputs

3. Pricing and payment schedule

3.1 Analysis will be delivered at a fixed-fee of \$22,500

3.3 Invoicing will cover 50% upon contracting, 25% upon draft report delivery, and 25% upon satisfactory completion of the project

4. Ownership and distribution rights

4.1 The client has full rights to use and distribute the deliverables.

5 Liabilities

5.1 Because of the uncertainty of future events and circumstances and because the contents are based on data and information provided by third parties upon which Tourism Economics has relied in good faith in producing the Deliverables, Tourism Economics does not warrant the accuracy of its measurements and forecasts and will not be liable for the contents of any of the foregoing or for the reliance by the Customer on any of the foregoing.

5.2 Liability is, in any case, limited to the current annual value of this contract.

Approved

Authorized Signature for Client

Printed Name and Title

Date



Authorized Signature for TE

Adam Sacks, President, Tourism Economics

Printed Name and Title

August 18, 2017

Date

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