Assessing the Impact of the *Deepwater Horizon* Oil Spill on Tourism and Recreation in the Gulf Region

Presentation at the BOEM Information Transfer Meeting - 2017

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Overview of presentation

- Project background and objectives
- Overview of the extent of the project work
- Discuss each of the data collection/analysis components
- Provide some summary key findings and conclusions
Background

- April 20, 2010: Deepwater Horizon oil rig explodes killing 11 workers and injuring 17 more
  - 4.9 million barrels of oil released

- Significant impacts on the ecosystem health and the Gulf region economy

- A lot of discussion of the significant impacts on tourism
  - Focus of this project
Project objectives

- **Part 1:** Update and extend tools BOEM can use to estimate scale of tourism and recreation in the Gulf region

- **Part 2:** Examine direct and indirect impacts of DWH oil spill on tourism
Data collection and data processing tasks

- Gulf Coasts Claim Facility data
- Field work
- Content analysis of web site and media descriptions of the spill
- Developed a database that provides levels of economic activity for tourism and recreation sector in 64 Gulf region counties
  - Econometric time series analysis of the data from three of the 64 counties
GCCF Data Summary and Analysis

Overview

- $20B fund to pay claims related to DWH
  - BP money
- August 2010 to June 2012
  - Replaced by court-supervised settlement program
  - We used data on paid claims from 8/22/10 to 3/1/12
- Our focus was on tourism-related claims in the data
  - Used BOEM definition of tourism
- Both business and individual claims
GCCF Data Analysis - Results

- Just under $2B in tourism-related claims paid over the time period
- Restaurant-related ($1B) led the way
  - Lodging ($337M)
  - Charter fishing ($115M)
- Texas had a different pattern of claims
- Louisiana and Florida had the highest amount of claims
Location of physical loss for tourism claims

Value of Losses (in Dollars)
Resident and Loss in County or Loss in County
- Up to 50,000
- 50,001 - 150,000
- 150,001 - 500,000
- 500,001 - 5,000,000
- Greater than 5,000,000

Maximum geographical extent of oil reaching the shore (between 5/24 and 8/7)
Residence of claimant for tourism claims

Value of Losses (in Dollars)

Resident of County
- Up to 50,000
- 50,001 - 150,000
- 150,001 - 500,000
- 500,001 - 5,000,000
- Greater than 5,000,000

Maximum geographical extent of oil reaching the shore (between 5/24 and 8/7)
Field Work - Overview

- ERG performed a total of 24 interviews in six different locations (TX to FL)
  - Tourism bureaus, trade associations, and businesses
  - Trade association and business interviews focused on industries with large (paid) tourism claims in GCCF

- Summer 2012

- Interviews focused on impacts and recovery related to DWH spill
Field Work Findings

- Public perception drove some of the impacts
  - Driven by media portrayals
- Prior planning and experience was key
- Information
  - Assisted in recovery
  - Needed for the future
- Collaboration assisted in recovery
- BP money was important for recovery
  - Marketing tourism in the sector
Content Analysis - Overview

- Reviewed newspaper reports from day after spill to January 2012
  - ~70-80 newspapers
  - Avoided op-ed/advocacy pieces

- Purpose: what story did the media tell about tourism and the spill?
Content Analysis Findings

- Recovery from 2008 recession was thwarted

- Articles later in the time period were indicating the region was getting back to pre-spill levels
  - BP money to help with marketing

- Misperceptions about impacts

- Tourism officials use of social media and the internet were helping the recovery
Tourism and Recreation Data Development – Overview

- County-level QCEW and Nonemployer data for 64 Gulf region counties

- Estimated the amount attributable to tourism and recreation using “tourism commodity ratios” (TCRs)
  - TCRs were sector but not county-specific

- Used quarterly data from 2009q2 to 2011q4
  - Looked at changes between “same quarters”
  - Focused on employment
Tourism and Recreation Data

Findings

- For counties with 1,000 or more employees (2009) only small initial declines or no decline at all followed by “recovery.”

- Two counties with >1,000 employees saw a decline
  - Hancock County, MS (hotels, restaurants, A&E)
  - Sarasota County, FL (A&E, hotels)
Tourism and Recreation Data

Findings

Orleans Parish, Louisiana

Hillsborough County, Florida
Why?

- Data issues
  - Looking for impacts in aggregate data
  - But, we parsed our tourism and recreation

- TCRs are constant over time

- Assessment and restoration efforts could have filled in the gaps
Econometric analysis

- Looked at monthly time series on **tourism employment** for three counties
  - Orleans Parish
  - Hillsborough County (FL)
  - Pinellas County (FL)

- Two modeling approaches
  - Transfer function: include controls for covariates and the spill
  - Forecast from prior period over the time period that includes the spill
Transfer function approach

- Used a 12 month seasonal model

- Controls based on tourism modeling
  - Income and wages
  - DWH spill and Katrina

- No impact for DWH spill

- Large impacts for Katrina
Forecast approach

- Estimate a simple time series model for tourism employment using a period prior to the spill
  - 12 month seasonal model

- Compare forecast to actual employment levels

- No impact found in the three counties
Orleans Parish

The graph shows the trend of tourism employment from 2003 to 2006. There is a significant drop in employment in August 2005, likely due to Hurricane Katrina. The graph includes actual employment and forecasted employment with different moving averages. The forecasted employment data shows an upward trend, indicating a recovery in tourism activities post-hurricane.
Hillsborough County

Disturbances related to changes in disclosure

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</table>
Key Findings

- Using multiple data sources results in a complicated and sometimes contradictory story of impact
  - Wide geographic impacts
  - Reach went beyond where the oil was
  - A story of resiliency?

- **Perception** can drive impact and recovery

- **Preparation** can lead to resilience and recovery