

**STUDY TITLE:** Modeling the Economic Impacts of Offshore Oil and Gas Activities in the Gulf of Mexico: Methods and Applications

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**CONTRACT NUMBER:** 14-35-0001-30660-19967 and 14-35-0001-30951-16803

**SPONSORING OCS REGION:** Gulf of Mexico

**APPLICABLE PLANNING AREA:** Western, Central, Eastern

**FISCAL YEAR(S) OF PROJECT FUNDING:** 1999, 2000, 2001

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**COST(S):** FY 1999: \$35,784.54; FY 2000: \$57,648.83; FY 2001: \$1,631.93;  
**CUMMULATIVE PROJECT COST:** \$95,065.30

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**KEY WORDS:** Gulf of Mexico; economic impact; offshore; economic model; outer continental shelf

**BACKGROUND:** The impact of oil and gas activities on communities surrounding the Gulf of Mexico (GOM) has become increasingly more pervasive since offshore activities began in earnest in 1947. While there have been numerous intermittent studies of the economic impacts these offshore activities have had over the years, no regular, comprehensive approach has been developed by either government, industry, or academia. The purpose of this research has been to assist the MMS in developing a new and inclusive approach for understanding the economic impacts of offshore oil and gas activities on GOM coastal communities.

**OBJECTIVES:** This research has three goals. First, to compile information on per unit costs associated with a host of different OCS oil and gas activities over a number of different water depths. Second, and most importantly, to develop an industry-specific expenditure profile for a number of different OCS oil and gas activities, over a number of different water depths. Third, to developed a general onshore allocation mapping for expenditures, by industry classification, to various GOM coastal communities.

**DESCRIPTION:** This study is the first of its kind to comprehensively examine the cost structures of offshore activities in the Gulf of Mexico. No other research has examined total costs, activity-specific costs, and the allocation of costs to onshore areas in the manner presented here.

**SIGNIFICANT CONCLUSIONS:** The results of this research are important for the ongoing analysis of how offshore activities in the Gulf of Mexico economically impact its surrounding communities. The methods and results presented in this research are specific to the Gulf, and as such, yield unique, and significantly different empirical results than those developed from more generalized economic impact models. The process of creating specific, real world models for offshore oil and gas activities in the Gulf of Mexico can yield meaningful differences when compared to standardized, secondary IO models. As such, the MMS motivation for moving forward with commissioning a study to develop these customized approaches appears to be justified.

**STUDY RESULTS:** The importance and nature of the results from the models developed in this research are voluminous. The most important result, however, are a set of tables which estimate how economic impacts associated with offshore oil and gas activities are allocated to various commodity/industry sectors. In addition, there are a number of detailed total, per unit cost estimates by offshore activity phase. Lastly, a number of tables have been provided that examine how various industry/commodity sectors supporting offshore activities are allocated across the GOM regions used by MMS. Utilizing all of these results, the researchers found that there are significant differences between using standardized models, and those that are customized to offshore activities in the GOM.

An example of the differences between standardized results, and those found in the research presented in this study can be found by examining the exploratory drilling category, in the 0-60 water depth category, for the LA-2 region. The differences in output, for instance, are 8 percent lower using the revised method of measuring economic impacts, than the standardized approach used in the IMPLAN economic impact modeling software. Labor income, however, is about 42 percent higher in the GOM customized analysis relative to standard approaches. Value added is 14 percent higher in the GOM customized model, while employment opportunities, represented by the number of jobs created by drilling new exploratory wells, is 62 percent higher in the customized GOM model than the standardized approach. These results, at minimum, support the notion that there are unique economic differences in the offshore industry and that the additional research in this project was useful in order to better understand the regional economic impacts associated with offshore activities in the Gulf of Mexico.

**STUDY PRODUCTS:** Dismukes, D.E., W.O. Olatubi, D.V. Mesyanzhinov, and A.G. Pulsipher. Modeling the Economic Impacts of Offshore Oil and Gas Activities in the Gulf of Mexico: Methods and Applications. Prepared by the Center for Energy Studies, Louisiana State University, Baton Rouge, La. U.S. Department of the Interior, Minerals Management Service, Gulf of Mexico OCS Region, New Orleans, La. OCS Study MMS 2003-018. 97 pp.