

Assessing Vulnerability of Sectors and Regions to OCS O&G Industry Volatility

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August 24, 2017

Following the Deepwater Horizon oil spill, there was an immediate concern that the short-term moratorium on deepwater drilling activities in the Gulf of Mexico might have long-term implications for business operations, particularly small and medium-sized businesses that may be more vulnerable than large multi-national energy companies. The purpose of this research was to identify spatial supply chain linkages of oil and gas operations from the outer continental shelf. These linkages were measured through a reduced-form approach of measuring multi-regional economic linkages from changes in demand for oil and gas extraction activities.

Results showed that between seven multi-parish regions in Louisiana, spillover effects outside the original region of oil and gas extraction demand averaged just over six percent of total output effects. When narrowing the focus to spillovers within a region, a focus on the BOEM LA-3 region which includes Lafayette Parish showed spillover effects between parishes that averaged over 13 percent.

These findings indicate that beyond the vulnerability of direct activity, regions that are most vulnerable are ones that provide oil and gas support activities (e.g. BOEM LA-3 region). Issues of aggregation bias and the modeling of larger geographic regions that aggregate more heterogeneous economic sectors of smaller regions appear to be less problematic when the upstream industries (such as oil and gas support) are concentrated in centers of metropolitan areas. However, both the precision of economic impact is lost as well as some accuracy when smaller regions purchase a larger percentage of inputs from regional suppliers than the aggregated region would indicate.