

Critique of the Inter-Agency Economic Report “Estimating the Economic Effects of the Deepwater Drilling Moratorium on the Gulf Coast Economy”

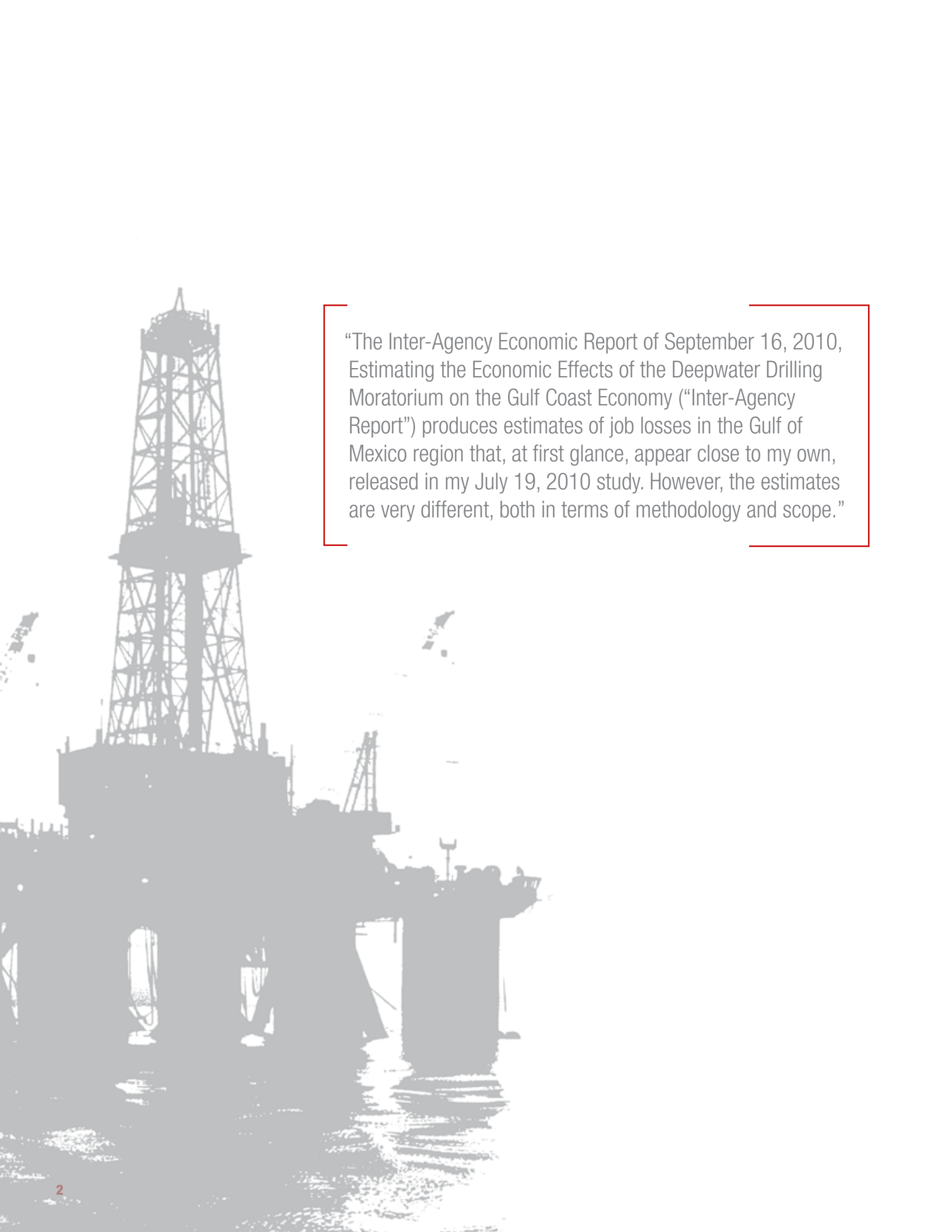
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“The Inter-Agency Economic Report of September 16, 2010, Estimating the Economic Effects of the Deepwater Drilling Moratorium on the Gulf Coast Economy (“Inter-Agency Report”) produces estimates of job losses in the Gulf of Mexico region that, at first glance, appear close to my own, released in my July 19, 2010 study. However, the estimates are very different, both in terms of methodology and scope.”

“The Report uses undisclosed survey methods to estimate the decrease in industry spending resulting from the drilling moratorium.”

Introduction

The Inter-Agency Economic Report of September 16, 2010, Estimating the Economic Effects of the Deepwater Drilling Moratorium on the Gulf Coast Economy (“Inter-Agency Report”)¹ produces estimates of job losses in the Gulf of Mexico region that, at first glance, appear close to my own, released in my July 19, 2010 study. However, the estimates are very different, both in terms of methodology and scope.

I. Methodological Concerns with the Inter-Agency Economic Report’s Measurements

While the analytical methods described in the Inter-Agency Report appear similar to standard BEA Rims II analysis, the Report

- Uses undisclosed survey methods to estimate the drilling moratorium;
- Reduces the input effect of decreased industry spending derived from the survey by \$141 million for no methodologically justifiable reason²; and
- Cuts the output, estimated job losses, by an ad hoc factor of 40-60 percent.³

A. The Inter-Agency Economic Report first Estimates the Effect of the Moratorium on Industry Participants

It appears that the Inter-Agency Report estimates its job losses by starting with the \$1.95 billion “total operating expenditure” decrease estimated by surveying industry participants in the Gulf of Mexico.⁴ It is unclear, however, if the information provided by these interviews was precise or ad hoc, and to what extent survey bias may have affected the results. While the need for confidentiality is understandable, the lack of details about the survey prevents the measurements from being replicated and therefore calls into question the scientific validity of the initial data input. This step is similar in spirit to the standard BEA method starting point of estimating the change in input or output value that will drive changes to economic growth that reverberate throughout the economy.

“The Report reduces the Inter-Agency Report cuts the estimated effect of 19,536 jobs by an ad hoc factor of 40-60 percent to arrive at its estimate of 8,000 to 12,000 jobs lost in the economy.”

1. Estimating the Economic Effects of the Deepwater Drilling Moratorium on the Gulf Coast Economy: Inter-Agency Economic Report, U.S. Department of Commerce (September 16, 2010) [hereinafter DOC Report].

2. Id. at 16.

3. Id. at 18.

4. Id. at 15.

“if the goal here is to estimate the effect of the moratorium in isolation, selectively picking and choosing offsets does not make sense.”

B. The Inter-Agency Economic Report then Adjusts the Industry Effect Downward for No Established Methodological Reason

The Inter-Agency Report then reduces the initial \$1.95 billion estimate to \$1.8 billion by subtracting \$141 million in “wage replacements” offered primarily by the Rig Worker Assistance Fund (\$40 million) and firms retaining workers (\$101 million).⁵

It appears that those subtractions are merely an ad hoc downward adjustment of the initial input. While the Inter-Agency Report justifies the adjustment by maintaining that it accounts for offsetting economic policies occurring at the time,⁶ if one wanted the total sum of all policies, one would need to add back the total \$8 billion spent by BP on cleanup activities, subtract the effects on the Gulf fishing industry, and add the effects of HAMP and the American Recovery and Reinvestment Act.

The point is, if the goal here is to estimate the effect of the moratorium in isolation, selectively picking and choosing offsets does not make sense.

“the Inter-Agency Report cuts the estimated effect of 19,536 jobs by an ad hoc factor of 40-60 percent to arrive at its estimate of 8,000 to 12,000 jobs lost in the economy.”

C. The Inter-Agency Report then Applies an Input-Output-type Multiplier to the Industry Effect

The Inter-Agency Report then divides the net \$1.8 billion in reduced total expenditures by a multiplier of \$92,136 per job, to obtain an estimated effect of 19,536 jobs.⁷ The Report uses a multiplier derived from the estimates for job creation from the American Recovery and Reinvestment Act (“ARRA”) rather than the widely used Bureau of Economic Analysis’ (“BEA”) RIMS-II multiplier.⁸ Nonetheless, the rate of \$92,136 per job is approximately equivalent to a BEA multiplier when that is applied to an appropriate production measure.

D. The Inter-Agency Report Adjusts Estimated Job Losses Downward by an ad hoc 40-60 percent for No Established Methodological Reason

Next, however, the Inter-Agency Report cuts the estimated effect of 19,536 jobs by an ad hoc factor of 40-60 percent to arrive at its estimate of 8,000 to 12,000 jobs lost in the economy. The Report offers two (uncited) justifications for this adjustment to the “standard” (assumed to mean RIMS-II) approach. First, the Inter-Agency Report claims that a “standard multiplier analysis assume[s] that the change being analyzed is long lasting.”⁹ Second, the Inter-Agency Report claims that the standard multiplier analysis assumes that “the policy change being analyzed is the only change occurring, with no other offsetting activities.”¹⁰ A review of the BEA’s RIMS II multiplier analysis documentation suggests that these two points may be substantially inaccurate and suggests that adjusting the multipliers in the ad hoc fashion used in the Inter-Agency Report is inappropriate.

5. Id. at 16.

6. Id.

7. Id. at 18.

8. Id. at Section 6.

9. Id. at 17.

10. Id.

“A review of the BEA’s RIMS II multiplier analysis documentation suggests...that adjusting the multipliers in the ad hoc fashion used in the Inter-Agency Report is inappropriate.”

1. Changes to be analyzed need not be long-lasting

The BEA RIMS II documentation offers no caveat that the changes to be analyzed need be long-lasting. In fact, one example provided in the BEA RIMS II handbook is that of estimating the effects from the initial construction phase of a sports stadium.¹¹ The construction phase represents the type of short term (albeit positive) economic shock the moratorium is causing. The RIMS II handbook does not suggest that the multiplier needs to be manipulated in any way in such an analysis.

The RIMS II model is the standard method that governmental authorities use to evaluate the benefits associated with economic development projects. According to the U.S. Department of Commerce, the RIMS II model has been used to evaluate the economic effects of projects like: opening or closing military bases, tourist expenditures, new energy facilities, opening or closing manufacturing plants, shopping malls, sports stadiums, and new airport or port facilities.¹² State and local governments routinely use the RIMS II model to perform economic analyses for similar purposes.¹³

The BEA states directly that the RIMS II multipliers can be used to assess the effects of “natural or man-made disasters,” suggesting that the RIMS-II multipliers are fully appropriate to assess the economic impact of temporary shocks, like an isolated oil rig disaster, without any adjustment like that made in the Inter-Agency Report.¹⁴ The BEA states that the multipliers were used to assess the effects of Hurricane Andrew, a category-4 hurricane that struck the Gulf of Mexico in 1992, a similar application to that sought with respect to the moratorium.¹⁵

2. While other economic policies may change the way the effects show up in actual economic numbers, they in no way detract from using the RIMS II to estimate the costs of economic policies

Although offsetting economic policies are important to consider in any analysis, to suggest that standard multiplier approaches cannot be used because of them is false. Nonetheless, in the presence of conflicting policies, the predictions made by the RIMS II multipliers may not be evident in common economic measures, *ex post*.

As a result, for instance, cleanup work opportunities will to some degree sterilize the effects of the moratorium as measured by jobless claims. That is not to be interpreted, however, as meaning that the moratorium did not destroy jobs and output – only that other opportunities happened to arise in the moment to pick up some of the slack. To argue that a policy was not costly because another policy offset the first is specious. Hence, multiplier approaches are still useful in predicting the cost portion of a cost-benefit analysis and can help calibrate offsetting stimulus policies.

“The RIMS II model is the standard method that governmental authorities use to evaluate the benefits associated with economic development projects.”

11. Everett Ehrlich, Steven Landefeld & Betty Barker, *Regional Multipliers: A User Handbook for the Regional Input-Output Modeling System (RIMS II)*, U.S. Department of Commerce, Third Edition (Mar. 1997), available at <http://www.bea.gov/scb/pdf/regional/perinc/meth/rims2.pdf>, at 10-13 [hereinafter *Regional Multipliers*].

12. See U.S. Department of Commerce, Bureau of Economic Analysis, *Brief Description: Applications of RIMS II* (available at <http://www.bea.gov/bean/regional/rims/brfdesc.cfm>).

13. *Regional Multipliers*, *supra*.

14. See BEA *Frequently Asked Questions*, available at http://faq.bea.gov/cgi-bin/bea.cfg/php/enduser/std_adp.php?p_faqid=63&p_created=1133813853 (last accessed on Sept. 16, 2010), (“Q. Can RIMS multipliers be used to estimate the economic impacts of natural or man-made disasters? A. In general, yes. In fact, RIMS was used to analyze the economic impacts of Hurricanes Andrew in 1992 and Charley in 2004. However, using RIMS multipliers for analyzing the impacts of natural or man-made disasters requires care, because such disasters can cause substantial changes to the structure of the local economy...”).

15. *Id*

3. There is no justification for any particular size ad hoc adjustment offered in the Inter-Agency Report

The Inter-Agency Report states that “the appropriate multiplier with which to analyze the impact of the deepwater drilling moratorium will be between 40 and 60 percent of the effect estimated by a full multiplier.”¹⁶ The Report admits, however, that there is no empirical or practical justification for this adjustment, when it states “We do not know with precision exactly how much smaller the economic effect might be, relative to the standard multiplier. Because of this, we use a range of multipliers, producing a range of possible job impacts.”¹⁷ No further justification is given for the magnitude of the parameter choice.

The Inter-Agency Report also does not cite literature to suggest such an adjustment is an appropriate use of multiplier analysis. In fact, multipliers represent the effect upon output, wages, and jobs of some change in demand, spending, or other input, based upon extensive study of prior relationships actually exhibited in the U.S. economy.¹⁸ For example, the BEA’s RIMS-II employment multiplier measures the decrease in employment associated with a \$1 million decrease in industrial activity.¹⁹ In Texas, for instance, the oil and gas extraction output multiplier is 2.0721, the wage multiplier is 0.5085, and the employment multiplier is 8.2985. An ad hoc manipulation of a multiplier therefore appears to be a very strong and cavalier assumption.

The BEA RIMS II Handbook provides no basis for reducing multiplier effects in the ad hoc manner undertaken in the Inter-Agency Report. As I have already stated, RIMS II multipliers have been applied to a wide range of short- and long-term projects with no need for similar treatment.

II. The Inter-Agency Report Limits its Effects to Job Loss and Does Not Consider Losses in Total Output, Wages, Jobs and Public Revenues.

The focus of the Inter-Agency Report is employment losses.²⁰ Nonetheless, there are numerous other factors that need to be considered when calculating the effects of the moratorium.

First, the Inter-Agency Report fails to consider the effect of the moratorium on economic output. Economic output, analogous to Gross Domestic/State Product (“GDP”), is the broadest measure of the incremental effect of the moratorium. Second, the Inter-Agency Report does not consider lost wages associated with the employment loss it is predicting. Third, output, wage, and job losses all decrease fiscal revenues at both the state and local and the federal level.

The BEA RIMS II multipliers allow researchers to estimate the comprehensive effect on output, income, or employment as a result of changes to product outputs (“final-demand”), and vice versa.²¹ As in my previous study, I assume that a state’s production is tied to its available

16. DOC Report, *supra*, at 18

17. *Id.*

18. Regional Multipliers, *supra*, at 18.

19. See *Id.* at 4 (“In the final-demand employment multiplier table, each column entry indicates the change in employment in each row industry that results from a \$1 million change in final demand in the column industry. The impact on each row industry is calculated by multiplying the final-demand change in the column industry by the multiplier for each row.”)

20. DOC Report, *supra*, at 18, (“A number of earlier studies have produced estimates of the impact of the deepwater drilling moratorium. Table 3 lists those studies most comparable to our analysis, that is, studies that focus primarily on the employment impacts associated with the decrease in offshore drilling activity as a result of the moratorium.”)

21. Regional Multipliers, *supra*, at 3. (“If the user can estimate the change in final demand in the initially affected industry, the user can estimate the impact on output, earnings, or employment on the basis of final-demand multipliers.”)

“I find that the Gulf States stand to lose 19,536 jobs, \$5 billion in economic output, \$1.1 billion in wages, and \$239 million in state and local tax revenues during the 6-month moratorium,”

Gulf of Mexico oil and gas reserves.²² The analysis of economic impact, therefore, hypothesizes that the economic benefits associated with offshore oil and gas production accrue onshore firstly in the local communities that provide the most convenient labor, materials, and support services for offshore production.

I use each state’s share of the total oil and natural gas reserves in the Gulf of Mexico to apportion the 19,536 job losses estimated without the ad hoc multiplier adjustment to their local Gulf States. For instance, based on my allocation I estimate on this basis that Louisiana will stand to lose 11,615 of the 19,536 jobs predicted by the Inter-Agency Report.

I then use the BEA multipliers for “Oil and Natural Gas Extraction” to calculate the change in final demand associated with the lost employment (see Appendix Table A1). For example, the final demand multiplier for Louisiana is 10.42 (meaning that 10.42 jobs are lost for every \$1 million change in final demand). Dividing Louisiana’s

apportioned job loss by the multiplier for Louisiana (accounting for the fact that the multiplier is associated with a \$1 million change in final demand) yields a change in final demand of \$1.7 billion. The multipliers for output and wages can then be applied to this change in final demand to yield the expected economic effects of the moratorium. The effective tax burdens for each state can then be applied to the expected loss in output to estimate the effects on state and local tax revenues (see Table A2).²³

Table 1 below presents the results of my calculations. I find that that the Gulf States stand to lose 19,536 jobs, \$5 billion in economic output, \$1.1 billion in wages, and \$239 million in state and local tax revenues during the 6-month moratorium, based on the Inter-Agency Report calculations without the ad hoc multiplier adjustment. Those effects differ significantly from the 8,000-12,000 jobs estimated in my own work.

Table 1
BEA RIMS II Analysis of the Inter-Agency Report Job Losses in the Gulf,
Omitting the *ad hoc* Multiplier Adjustment

State	Change in Final Demand (\$ Mil)	Output (\$ Mil)	Earnings (\$ Mil)	Employment (Jobs)	State and Local Tax Revenues (\$ Mil)
Florida	1	1	0.33	11	0.06
Texas	611	1,267	311	5,072	46
Alabama	270	407	87	1,551	21
Mississippi	227	348	74	1,287	25
Louisiana	1,693	3,035	690	11,615	146
Total GOM	\$2,802	\$ 5,057	\$1,162	19,536	\$239

Source: BEA RIMS II Multipliers (2006); Estimating the Economic Effects of the Deepwater Drilling Moratorium on the Gulf Coast Economy

Notes: The Inter-Agency Report estimates that 8,000 -12,000 jobs are being lost, but that is based on taking 40 to 60 percent of the estimated job losses. This table uses the full jobs lost without this reduction, or 19,536 jobs.

22. In a previous paper, I apportioned OCS Planning Area reserves—and the local economic benefits associated with exploiting those reserves—by each state’s share of the ocean coastline bordering an OCS Planning Area. Based on that allocation, the percentage of loss in this study allocated each state would be: LA: 59%; MS: 6%; AL: 7%; TX: 25%; FL: .01%. See Joseph R. Mason, The Economic Contribution of Increased Offshore Oil Exploration and Production to Regional and National Economies, American Energy Alliance (Feb. 2009).

23. Matthew Nagowski, Measures of State and Local Tax Burden, New England Public Policy Center, Federal Reserve Bank of Boston (Jul. 13, 2006), available at: <http://www.bos.frb.org/economic/neppc/memos/2006/nagowski071306.pdf>. In a previous paper, I apportioned OCS Planning Area . DOC

“The Inter-Agency Report glosses over estimates of lost economic output, wages, and state and local taxes that are vital to the affected regions.”

III. Conclusions.

The Inter-Agency Report of September 16, 2010, *Estimating the Economic Effects of the Deepwater Drilling Moratorium on the Gulf Coast Economy*²⁴ produces estimates of job losses in the Gulf of Mexico region that, at first glance, appear close to those established in my July 19, 2010 study. However, the estimates are very different – both in terms of methodology and scope.

The Inter-Agency Report uses undisclosed survey methods to estimate the decrease in industry spending resulting from the drilling moratorium, reduces the input effect of decreased industry spending derived from the survey by \$141 million for no methodologically justifiable reason,²⁵ and cuts the output, estimated job losses, by an ad hoc factor of 40-60 percent.²⁶ Moreover, the Inter-Agency Report glosses over estimates of lost economic output, wages, and state and local taxes that are vital to the affected regions.

While the Inter-Agency Report argues that the harm will end with the expiration of the moratorium, it admits that operations will begin only slowly as operators take steps to conform to new safety guidelines and regulations that have yet to be announced. Moreover, the pause in economic activity will not be made up for in an accelerated growth (aka a “Catch-up”) phase – rather, it is irretrievably lost for the region as a whole, including the businesses, families, and workers who live there.

Last, the Inter-Agency Report is still just an evaluation of the original deepwater moratorium, not the revised moratorium that had de facto implications for shallow water operations throughout the Gulf.²⁷ Currently 15 of the 46 shallow-water rigs active when the Deepwater Horizon spill occurred are now idle.²⁸ Another four have left the region. Additionally, since the moratorium was passed, only four new permits for shallow-water drilling have been granted. Two shallow-water rig operators, Seahawk Drilling Inc. and Hercules Offshore, reported a few hundred layoffs.²⁹ These workers are not eligible for the aid from the Rig Worker Assistance Fund that the Inter-Agency Report claims will offset some of the negative impact of the moratorium, nor do those operations appear to be part of the survey process that determined the industry activity inputs for Inter-Agency Report’s estimation exercise.

“Currently 15 of the 46 shallow-water rigs active when the Deepwater Horizon spill occurred are now idle. Another four have left the region.”

24. Report, *supra*.

25. *Id.* at 16.

26. *Id.* at 18

27. Jonathan Tilove, Federal report downplaying drilling moratorium effects is disputed by Mary Landrieu, Vitter, *The Times-Picayune* (Sept. 16, 2010), available at http://www.nola.com/news/gulf-oil-spill/index.ssf/2010/09/federal_report_that_drilling_m.html.

28. Editorial Staff, 12,000 Jobs are a Big Loss, *THE TIMES PICAYUNE* Sept. 18, 2010, available at <http://www.nola.com/news/t-p/editorials/index.ssf?/base/news-7/1284787246125860.xml&coll=1> (last viewed Sept. 20, 2010).

29. *Id.*

“Proposals from the President and Congress that would levy additional taxes on the U.S. oil and natural gas sector . . . will further increase production costs in the Gulf of Mexico, crystallizing losses in output, wages, and jobs in the region.”

In summary, it is important to recognize that the estimates in the Inter-Agency Report only confirm the lower-bound economic effects measured by my previous study. Importantly, the Inter-Agency Report's effects are greater than my own: almost 20,000 jobs, \$5 billion in Gross State Product, and \$240 million in lost state and local tax revenues, and still do not measure the all-in costs of the policy.

While it remains unclear whether the administration will meet its deadline for lifting the moratorium and how heavy the additional burden of conforming to new drilling regulations will be, proposals from the President and Congress that would levy additional taxes on the U.S. oil and natural gas sector through:

- A tenfold increase in the oil spill liability tax, intended to subsidize “alternative” energy;
- The repeal of Sec. 199 manufacturing credit for the oil and gas industry; and
- The repeal of dual capacity credits for domestic oil and gas firms;

will further increase production costs in the Gulf of Mexico, crystallizing losses in output, wages, and jobs in the region.

Appendix A: Additional Tables

Table A1

RIMS II Multipliers: Final Demand (2006)

State	Output	Earning	Employment
Alabama	1.5047	0.3206	5.7384
Louisiana	1.7932	0.4079	6.8625
Mississippi	1.5301	0.3263	5.6673
Texas	2.0721	0.5085	8.2985
United States	2.3938	0.6109	10.4152

Source: Regional Input-Output Modeling System (RIMS II), Regional Product Division, Bureau of Economic Analysis, U.S. Commerce Department.

Table A2

State and Local Tax Burden, 2008

State	State and Local Taxes	Gross State Product	Tax Burden
Alabama	8,920,105,000	170,014,000,000	5.20%
Louisiana	10,697,358,000	222,218,000,000	4.80%
Mississippi	6,626,204,000	91,782,000,000	7.20%
Texas	44,919,866,000	1,223,511,000,000	3.70%

Source: U.S. Census Bureau, Bureau of Economic Analysis

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Dr. Mason's consulting practice provides firms with advice on financial, political, and legal risks in banking and finance. Dr. Mason has consulted on issues ranging from mortgage, home equity loan, home equity line of credit, auto, and credit card servicing, and securitization, to discrimination and disparate impact in consumer lending and insurance pricing, valuing distressed securities, the investor recoveries and efficient liquidations of bankrupt firms, and economic valuations of complex investment and lending arrangements involving asset-backed securities, collateralized debt obligations, and hedge funds. In litigation, he regularly serves as testifying or non-testifying expert on matters related to a wide variety of financial market-related claims. Dr. Mason has consulted for and advised investment firms, corporations, and research institutions, including The Conference Board, Inc., Coventry First, Deloitte, Fannie Mae, the Federal Deposit Insurance Corporation, the Federal Reserve Bank of Philadelphia, The Group of Thirty, Pricewaterhouse-Coopers, and The World Bank Group.

Dr. Mason's academic research focuses primarily on investigating liquidity in thinly-traded assets and illiquid market conditions. Current academic research projects analyze default risk, including both immediate and cross-default risk, and default resolution costs in the contexts of asset-backed securities, in systemic and non-systemic environments, as well as the efficacy of bailout and resolution policies through the history of financial markets. His research and economic commentary has received hundreds of national and international press citations in publications such as the Wall Street Journal, New York Times, Washington Times, The Economist, Financial Times, Barrons, Business Week, die Zeit, Neue Zürcher Zeitung, Financial Times-Germany, Los Echos, Forbes, Fortune, Portfolio Magazine, Bloomberg Magazine, American Banker, and on press syndicates such as Associated Press, Reuters, Bloomberg, KnightRidder, and MarketWatch-Dow Jones Newswire.

Dr. Mason received a B.S. in economics from Arizona State University in 1990 and a Ph.D. from the University of Illinois in 1996.



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