REGULATORY EXPENDITURES, ECONOMIC GROWTH AND JOBS: AN EMPIRICAL STUDY
Bi-Partisan Priorities

- Increase Economic Output
- Increase the Number of Jobs
- Curb Regulatory Burden that hinders Growth and Jobs
- Reduce the Deficit
  - Reduced spending
  - Higher Revenues
The American people deserve a regulatory system that works for them, not against them: a regulatory system that protects and improves their health, safety, environment, and well-being and improves the performance of the economy without imposing unacceptable or unreasonable costs on society; regulatory policies that recognize that the private sector and private markets are the best engine for economic growth; regulatory approaches that respect the role of State, local, and tribal governments; and regulations that are effective, consistent, sensible, and understandable. \textit{We do not have such a regulatory system today.}

Quoting Pres. William Clinton’s \textit{EXECUTIVE ORDER 12866}
<table>
<thead>
<tr>
<th>ACTION</th>
<th>INTENDED</th>
<th>RESULT</th>
</tr>
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<tbody>
<tr>
<td>Reduce Regulatory Burden</td>
<td>GDP Growth</td>
<td>Job Growth</td>
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Policy Strategy

- Agency self-assessment of regulations?
- Congressional review of individual regulation?
- Since self-assessment and rule-by-rule review by Congress is not realistic, perhaps a higher level approach is preferred.
Alternate Policy Strategy

ACTION

- Cut Regulatory Budget

INTENDED RESULT

- Reduce Regulatory Burden
- Reduce Deficit Spending
- GDP Growth
- Job Growth
Alternate Policy Strategy: An Empirical Analysis

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<tr>
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<td>Cut Regulatory Budget</td>
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Relationships of Interest

- What is the historical relationship between expenditures on regulation and private-sector GDP?
- What is the historical relationship between expenditures on regulation and private-sector jobs?
- By quantifying these relationships, we can then simulate a “shock” to the regulatory budget and trace out the implications on GDP and jobs.
Data

- Private Sector Economic Output ($y_t$)
  - (GDP – Government Spending)/Population
  - U.S. Government Data
- Private Sector Jobs ($l_t$)
  - U.S. Government Data
- Regulatory Budget ($r_t$)
  - Federal Expenditures on Regulatory Agencies ÷ Private Sector Economic Output ($y_t$)
  - Dudley & Warren, A Decade of Growth in the Regulator’s Budget (May 2010)
- 1960 – 2009 (50 years of data)
Regulatory budget defined as (the natural log of) federal spending on regulatory agencies divided by private sector GDP.

Using a statistical technique (the Hodrick-Prescott Filter), the trend and cyclical components of the regulatory budget can be identified.

As shown in the figure, regulatory expenditures as share of GDP is rising over the past fifty years.
Empirical Approach

- Estimate a Trivariate Vector Autoregression ("VAR") using our three variables (in first differences; all are I(1))
- Using the estimates from the VAR, estimate the response of GDP and Jobs to a shock in the Regulatory Budget using the Generalized Impulse Response Function ("GIRF")
- This approach is standard fare and commonly appears in the academic literature
Regulation imposes costs, and costs eventually find their way to prices. Thus, effect on GDP may not be strong. In effect, the cost of regulation are included in GDP.

- Typical “cost of regulation” research focuses on such costs

Effect on jobs is expected to be statistically and economically significant.

- Most regulation today raises the cost of doing business, which reduces economic activity, though not necessarily prices.
Impulse Response Function from a positive shock to the Regulatory Budget.

Increases in the regulatory budget reduces private sector output. Or, decreases in the budget increases private sector output.

The effect weakens at about the 5th year. Not surprising. We limit our attention to 5 years.
## Sizing the Effects: GDP (Billions)

<table>
<thead>
<tr>
<th>Budget Cut</th>
<th>-5%</th>
<th>-10%</th>
<th>-16%</th>
</tr>
</thead>
<tbody>
<tr>
<td>GDP Effect Year 1</td>
<td>$84</td>
<td>$168</td>
<td>$267</td>
</tr>
<tr>
<td>GDP Effect Year 2</td>
<td>$78</td>
<td>$155</td>
<td>$247</td>
</tr>
<tr>
<td>GDP Effect Year 3</td>
<td>$104</td>
<td>$207</td>
<td>$328</td>
</tr>
<tr>
<td>GDP Effect Year 4</td>
<td>$87</td>
<td>$172</td>
<td>$274</td>
</tr>
<tr>
<td>GDP Effect Year 5</td>
<td>$57</td>
<td>$113</td>
<td>$181</td>
</tr>
<tr>
<td>Five-Year Total GDP (PV)</td>
<td>$376</td>
<td>$474</td>
<td>$1,189</td>
</tr>
<tr>
<td>Avg. Annual GDP Increase</td>
<td>$75</td>
<td>$149</td>
<td>$238</td>
</tr>
</tbody>
</table>
Annual GDP Gains from Cutting the Federal Regulatory Budget

- 5% Cut: $75 Billion
- 10% Cut: $149 Billion
- 16% Cut: $238 Billion
Impulse Response Function from a positive shock to the Regulatory Budget.

Increases in the regulatory budget reduces private sector employment. Or, decreases in the budget increases private sector employment.

The negative effects persist over the 10-year window.
Sizing the Effects: Jobs

<table>
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<th>Budget Cut</th>
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<th>-10%</th>
<th>-16%</th>
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<tr>
<td>Jobs Effect Year 1</td>
<td>703,226</td>
<td>1,401,888</td>
<td>2,234,301</td>
</tr>
<tr>
<td>Jobs Effect Year 2</td>
<td>1,104,430</td>
<td>2,197,551</td>
<td>3,494,534</td>
</tr>
<tr>
<td>Jobs Effect Year 3</td>
<td>1,322,742</td>
<td>2,629,057</td>
<td>4,175,238</td>
</tr>
<tr>
<td>Jobs Effect Year 4</td>
<td>1,480,034</td>
<td>2,939,465</td>
<td>4,663,991</td>
</tr>
<tr>
<td>Jobs Effect Year 5</td>
<td>1,330,555</td>
<td>2,644,487</td>
<td>4,199,555</td>
</tr>
<tr>
<td>Average Job Effect</td>
<td>1,188,197</td>
<td>2,362,490</td>
<td>3,753,524</td>
</tr>
<tr>
<td>Loss in Regulatory Jobs</td>
<td>-12,109</td>
<td>-24,217</td>
<td>38,747</td>
</tr>
</tbody>
</table>
Annual Private-Sector Job Gains from Cutting the Federal Regulatory Budget

- 5% Cut: 1,188,197 jobs
- 10% Cut: 2,362,490 jobs
- 16% Cut: 3,753,524 jobs
Cost Per Regulator

- On average, each Federal Regulatory Agency Employee Cuts GDP by $6,200,000
- On average, each Federal Regulatory Agency employee Eliminates 98 Private-Sector Jobs and Destroys the Equivalent of the Economic Output of 134 Persons
A common way to assess the impact of spending on jobs is to compute the number of jobs gained or lost from a $1 million change in spending – the jobs multiplier.

For spending on telecommunications plant, the jobs multiplier is about 17:
- A $1 million increase creates about 17 jobs.

For regulatory budget, the jobs multiplier is computed to be -418:
- A $1 million increase reduces private sector employment by 418 jobs.
Robustness

To assess the effect of sample size, we estimated the effects using samples of 1960-2009 (Full Sample), 1970-2009, and 1980-2009.

Both the GDP and Jobs effects rise slightly, suggesting regulation may be more costly in recent years.

We also estimated using larger and smaller VARs.

<table>
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<tr>
<th>Sample Years</th>
<th>Avg. GDP Effect</th>
<th>Avg. Jobs Effect</th>
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<tr>
<td>1960-2009</td>
<td>$75 Billion</td>
<td>1,188,197</td>
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<tr>
<td>1970-2009</td>
<td>$101 Billion</td>
<td>1,234,565</td>
</tr>
<tr>
<td>1980-2009</td>
<td>$126 Billion</td>
<td>1,381,238</td>
</tr>
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</table>
Finding

- Responsible cuts in the federal regulatory budget may have significant impacts on economic growth and job recovery.
- The cost of regulatory bureaucracy is large.
- Reducing regulation may have a relatively high payoff versus other actions to stimulate economic recovery.
Regulation has benefits. The question is whether Benefits exceed Costs. We find the costs are high.

We do not address specific regulations, but the budget in total.

We do not address state regulation.

Compliance costs are embedded in GDP, so we undercount the costs.