Sequestration and Federal R&D

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For the House Research & Development Caucus

AAAS R&D Budget and Policy Program
http://www.aaas.org/spp/rd
Methodology

Baseline
1. Started with FY12 R&D numbers adjusted for FY 2013 CR
2. Started with BCA discretionary caps as future baseline

Balanced Sequester
1. Applied cuts in OMB’s September report (9.4, 8.2) for FY 2013
2. Applied reduction trajectory from CBO’s estimates

NDD-only Sequester
5. Shift defense cuts onto nondefense
6. Reallocate portion to mandatory per OMB report

States
7. Applied 5-year averages from NSF data
Federal R&D Under Budget Control Act Caps With and Without Sequestration

in billions of constant FY 2012 dollars

Source: Based on AAAS estimates of R&D funding and the FY 2013 budget, and CBO analyses of the Budget Control Act.

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Federal Nondefense R&D Under BCA Caps With and Without Sequestration

in billions of constant FY 2012 dollars

Source: Based on AAAS estimates of R&D funding and the FY 2013 budget, and CBO analyses of the Budget Control Act.

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### Under Current-Law Sequestration...

<table>
<thead>
<tr>
<th>Agency</th>
<th>Average Annual Cut</th>
<th>5-Year Cut (Percent)</th>
<th>R&amp;D Budget Lowest Since...</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total R&amp;D</td>
<td>$11.5 billion</td>
<td>-8.4%</td>
<td>2002</td>
</tr>
<tr>
<td>Defense</td>
<td>$6.7 billion</td>
<td>-9.1%</td>
<td>2003</td>
</tr>
<tr>
<td>NIH</td>
<td>$2.3 billion</td>
<td>-7.6%</td>
<td>2002</td>
</tr>
<tr>
<td>Energy</td>
<td>$917 million</td>
<td>-8.2%</td>
<td>2008</td>
</tr>
<tr>
<td>NSF</td>
<td>$421 million</td>
<td>-7.6%</td>
<td>2010</td>
</tr>
<tr>
<td>NASA</td>
<td>$705 million</td>
<td>-7.6%</td>
<td>1988</td>
</tr>
<tr>
<td>Agriculture</td>
<td>$175 million</td>
<td>-7.6%</td>
<td>1998</td>
</tr>
</tbody>
</table>

*Note: The above is in constant FY 2012 dollars*
Composition of the FY 1970 Budget

outlays in billions of dollars

- Net Interest: $14
- Other Mandatory: $23
- Medicaid: $3
- Medicare: $6
- Social Security: $30
- Nondefense Discretionary: $31
- Nondefense R&D: $7
- Defense Discretionary: $74
- [Defense R&D]: $8

Source: Budget of the United States Government FY 2013.
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Composition of the FY 1980 Budget

outlays in billions of dollars

- Defense Discretionary: $120
- [Defense R&D]: $15
- Nondefense Discretionary: $126
- [Nondefense R&D]: $16
- Social Security: $117
- Medicare: $31
- Medicaid: $14
- Other Mandatory: $100
- Net Interest: $53

Source: Budget of the United States Government FY 2013.
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Composition of the FY 1990 Budget

outlays in billions of dollars

- **Defense Discretionary**: $259
- **[Defense R&D]**: $41
- **[Nondefense R&D]**: $23
- **Social Security**: $247
- **Medicare**: $96
- **Medicaid**: $41
- **Other Mandatory**: $185
- **Net Interest**: $184
- **Nondefense Discretionary**: $177
- **Total**: $885

Source: *Budget of the United States Government FY 2013.* © 2012 AAAS
Composition of the FY 2012 Budget
outlays in billions of dollars

- Net Interest: $225
- Defense Discretionary: $628
- Medicaid: $255
- Medicare: $478
- Social Security: $773
- Other Mandatory: $746
- Nondefense Discretionary: $546
- [Defense R&D]: $81
- [Nondefense R&D]: $64

Source: Budget of the United States Government FY 2013.
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Composition of the FY 2017 Budget?

outlays in billions of dollars

- Defense Discretionary: $515
- [Defense R&D]: $66
- Nondefense Discretionary: $517
- [Nondefense R&D]: $63
- Social Security: $1,026
- Medicare: $633
- Medicaid: $423
- Other Mandatory: $714
- Net Interest: $566

Source: Budget of the United States Government FY 2013.
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Sequestration and the COMPETES Agencies

in billions of nominal dollars

COMPETES Agencies include NIST, NSF, and DOE Office of Science. Based on AAAS estimates of R&D funding under sequestration and historical agency budgets.

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Shared Priorities for Appropriators

- In the most recent cycle, both House and Senate appropriators have approved R&D boosts at:
  - NSF: +3%
  - DHS: +30%
  - NNSA: 7%
  - NIST: +14%
  - NASA Science: +6%
  - Transportation: +5%

- Sequestration partially or completely offsets all of these
## Top 10 States by Lost R&D (Balanced Sequestration)

<table>
<thead>
<tr>
<th>State</th>
<th>5-Year Cut (Millions)</th>
<th>5-year cut (Percent)</th>
</tr>
</thead>
<tbody>
<tr>
<td>California</td>
<td>-11,315</td>
<td>-8.5%</td>
</tr>
<tr>
<td>Maryland</td>
<td>-5,440</td>
<td>-8.1%</td>
</tr>
<tr>
<td>Virginia</td>
<td>-4,256</td>
<td>-8.8%</td>
</tr>
<tr>
<td>Massachusetts</td>
<td>-3,140</td>
<td>-8.4%</td>
</tr>
<tr>
<td>D.C.</td>
<td>-2,877</td>
<td>-8.6%</td>
</tr>
<tr>
<td>Texas</td>
<td>-2,822</td>
<td>-8.6%</td>
</tr>
<tr>
<td>New York</td>
<td>-2,401</td>
<td>-8.2%</td>
</tr>
<tr>
<td>New Mexico</td>
<td>-1,880</td>
<td>-8.4%</td>
</tr>
<tr>
<td>Pennsylvania</td>
<td>-1,754</td>
<td>-8.2%</td>
</tr>
<tr>
<td>Washington</td>
<td>-1,661</td>
<td>-8.5%</td>
</tr>
</tbody>
</table>
For more info...

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www.aaas.org/spp/rd/
NIH R&D Under BCA Caps With and Without Sequestration
in billions of constant FY 2012 dollars

- NIH
- ARRA
- Under BCA Caps
- Under Sequestration
- Under NDD Cuts Only

1997 1999 2001 2003 2005 2007 2009 2011 2013 2015 2017

$45 $40 $35 $30 $25 $20 $15
NASA Budget Under BCA Caps With and Without Sequestration
in billions of constant FY 2012 dollars

- NASA
- ARRA
- Under BCA Caps
- Under Sequestration
- Under NDD Cuts Only

U.S. R&D INVESTMENT
NSF R&D Under BCA Caps With and Without Sequestration
in billions of constant FY 2012 dollars

- NSF
- ARRA
- Under BCA Caps
- Under Sequestration
- Under NDD Cuts Only
USDA R&D Under BCA Caps With and Without Sequestration
in billions of constant FY 2012 dollars

- USDA
- ARRA
- Under BCA Caps
- Under Sequestration
- Under NDD Cuts Only

1997 1999 2001 2003 2005 2007 2009 2011 2013 2015 2017

$1.5 $1.7 $1.9 $2.1 $2.3 $2.5 $2.7 $2.9 $3.1