



Acquisition Research Program:
Creating Synergy for Informed Change

The Economic *Returns* of U.S. Shipbuilding

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Why Research?

- Recession, Stimulus Packages
- 313-ship goal –vs– CBO / CSBA funding estimates required
- **Sponsor: RADM Steve Johnson**, Former Director, SSP
 - (changed command last Friday)
- **Oxford Economics Study:**
 - “The Economic Case for Investment in UK Defence Industry”
(September, 2009)



1st: Concerns of Skeptics

- *“Defense-spending multipliers exceeding one likely apply only at very high unemployment rates, and nondefense multipliers are probably smaller.”*
 - -- Dr Robert Barro & Mr Charles Redlick (Wall Street Journal , Oct 1, 2009)
- *“...fiscal stimulus can sometimes have a “multiplier” effect: ...there can be a further indirect effect as higher incomes lead to higher consumer spending.”*
 - -- Dr Paul Krugman (New York Times, Jan 8, 2009)



A Few Disclaimers

- Defined “shipbuilding and repairing” by North American Industrial Classification System Code
- BEA’s Benchmark Data used is 2002 data
 - Updated in 2008
 - Most Recent Benchmark Input/Output Data Available
- Leontief models are linear
 - Does not consider “economies of scale” in production, etc.



• I am not an Economist

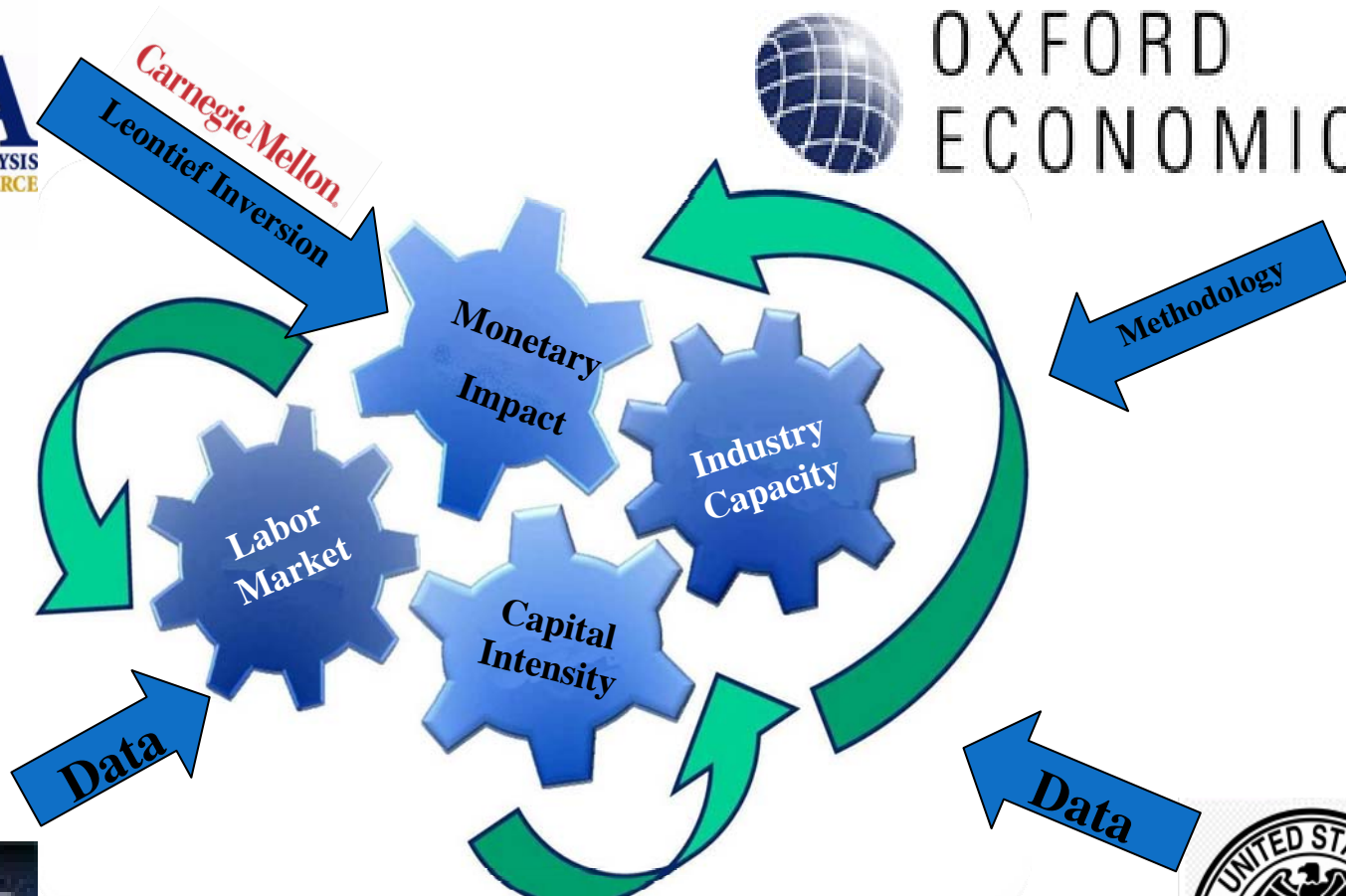
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Naval Postgraduate School
Monterey, CA

“What are the Economic Benefits of Shipbuilding?”

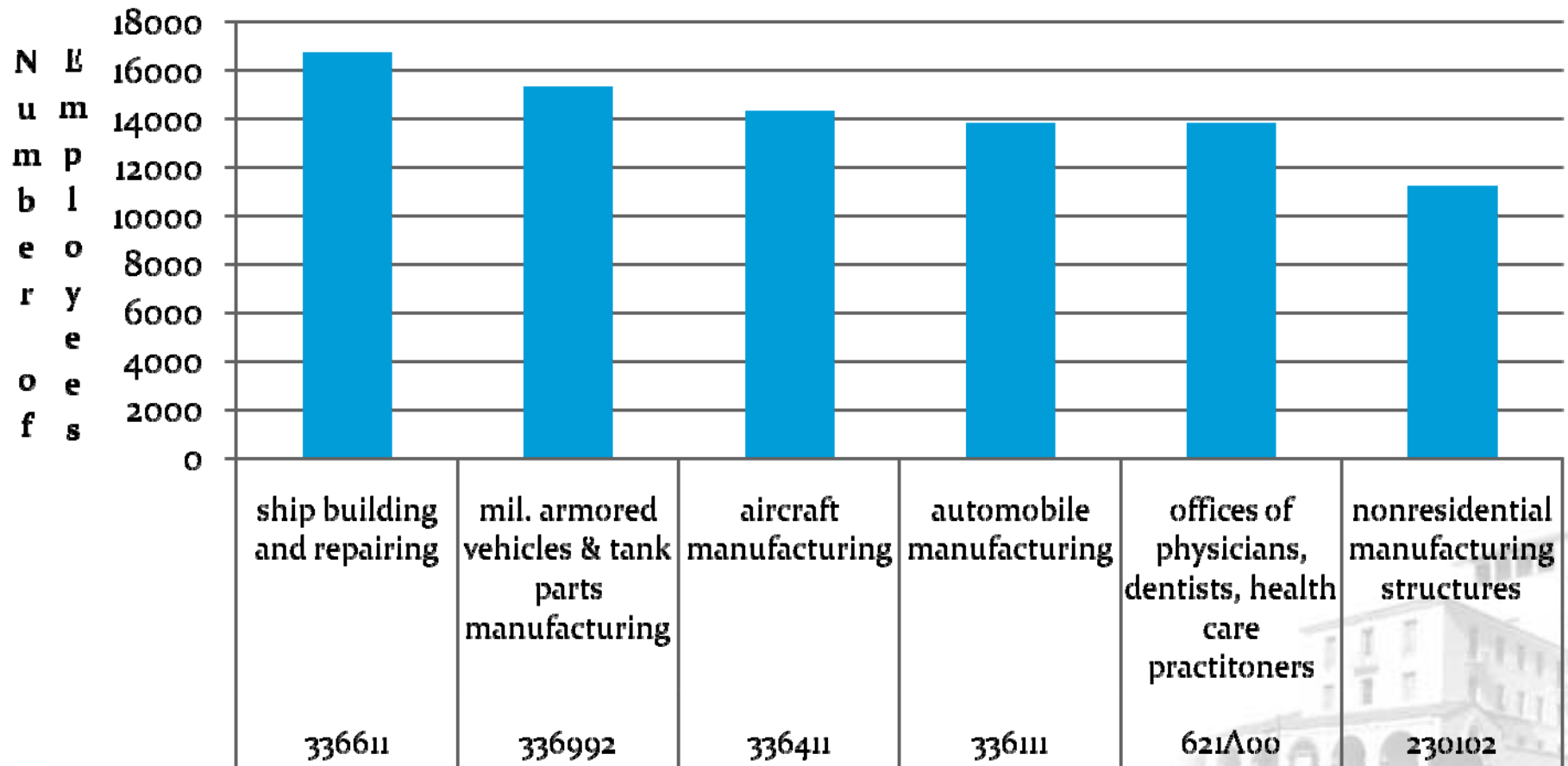


OXFORD
ECONOMICS



Results (Labor Market Impact)

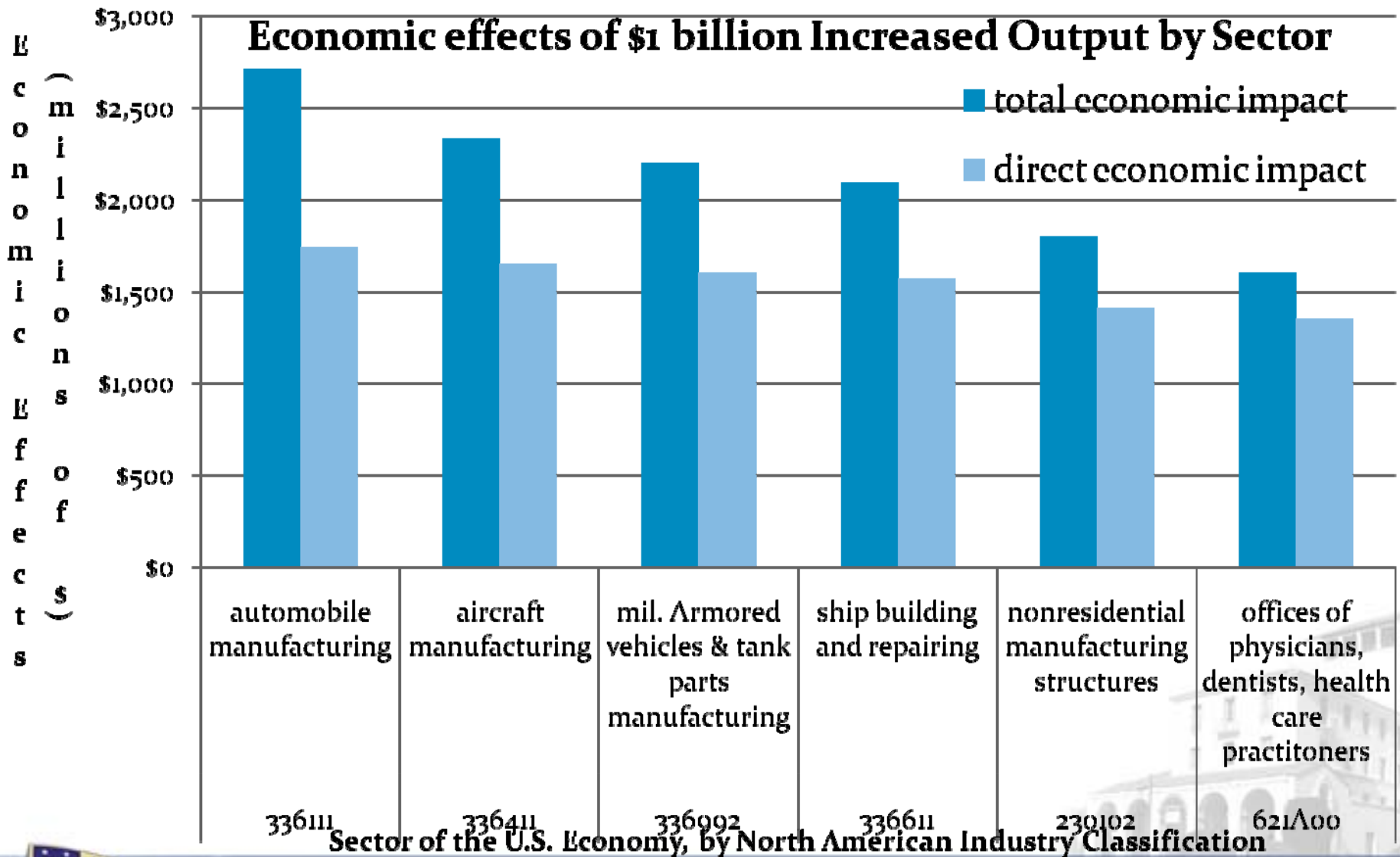
Number of employees throughout supply chain in order to produce additional \$1 billion output



Sector of the U.S. Economy, by North American Industry Classification



Results (Monetary Impact)



So What !?

Increase in SCN (\$ Billion)	Total SCN Budget Level (\$ Billion)	Total Economic Impact (\$ Billion)
0	\$13.8	\$46.2
\$0.1	\$13.9	\$46.6
\$1	\$14.8	\$49.6
\$2	\$15.8	\$52.9
\$5	\$18.8	\$63.0
\$6	\$19.8	\$66.3
\$7	\$20.8	\$69.7
\$8	\$21.8	\$73.0
\$9	\$22.8	\$76.4
\$10	\$23.8	\$79.7



Economic Activity GDP Growth



\$1 → \$3.35

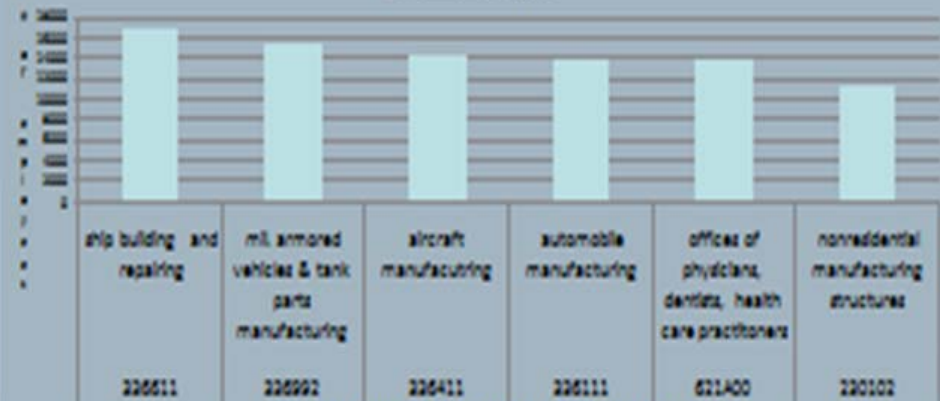
(calculated type II multiplier)

Results

Jobs, Jobs, Jobs



Number of employees throughout supply chain to produce an additional \$1 billion output



Source: U.S. economy (by North American Industrial Classification System code)

Capital Intensity



Billions of \$\$ in Capital Investments
Highest Total Asset Turnover Ratio

Capacity Utilization



66 %

“Shovel Ready”



Now What !?

- Shipbuilding:

- a “stimulus package” & a “jobs bill”
- Economic argument: a path to ‘313’ ships

- Rep. Rob Wittman’s (R-VA) “National Shipbuilding Budget Policy Act” (HR 5035), April 15th:

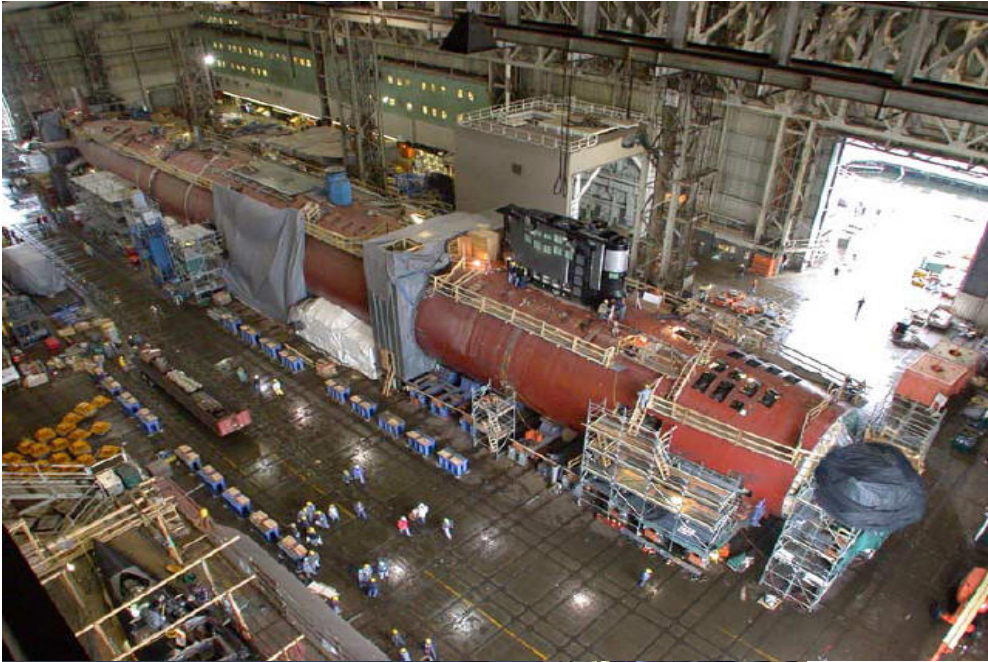
- **\$20 Billion / year → \$67 Billion of Activity!**

- Note: calculated type II multiplier of 3.35 : 1

- **\$20 Billion / year → 103, 540 NEW JOBS!**

- Note: Assuming \$6.2 Billion additional final demand from the shipbuilding sector.
Calculated using Carnegie Mellon EIO-LCA model for Leontief Input/Output Inversion



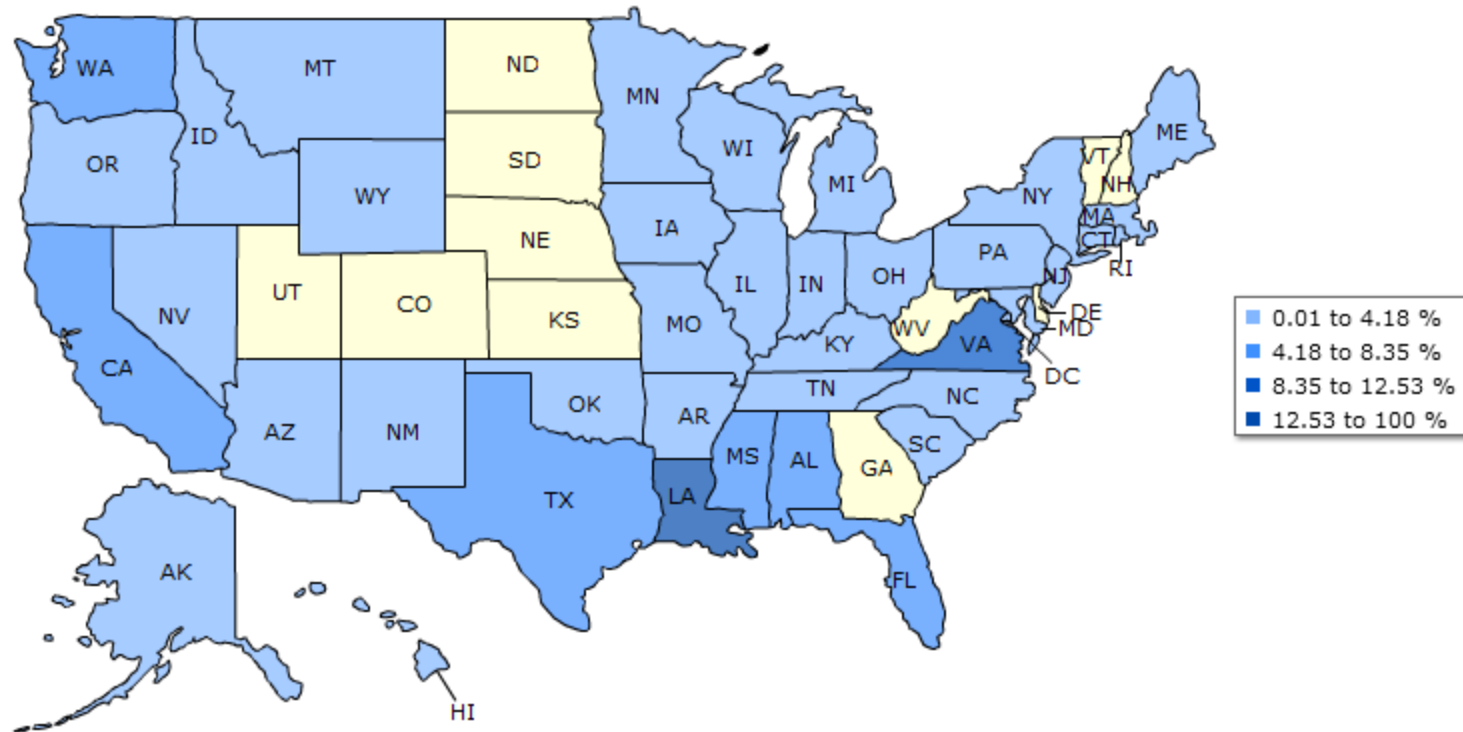


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Backup Slides





Carnegie Mellon University Green Design Institute. (2010) Economic Input-Output Life Cycle Assessment (EIO-LCA) US 1997 (491) model [Internet], Available from: <<http://www.eiolca.net/>> [Accessed 9 Mar, 2010]



