

# Methodology for Estimating Non-Residential Construction Outlays By State and Their Economic Impacts in 2007

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## Research Objective

The objective of this methodology is to estimate the 2007 dollar value of private and public sector non-residential building construction outlays, available only at the national level from the U.S. Department of Commerce, Bureau of the Census, by state and to calculate the impacts of this direct spending on their respective state economies in terms of their contributions to gross state product, personal earnings and job growth.

## State-by-State Estimating Methodology

Three state-by-state databases reflecting the construction sector were utilized to develop a composite state-by-state percentage distribution by which the national 2007 estimate for the total value of non-residential spending could be distributed to the state level for all 50 states and the District of Columbia. These state-by-state databases included: total construction employment for 2007 (U.S. Department of Labor); the combined value of office, industrial, warehouse and retail construction in 2007 (McGraw-Hill Construction), and the total value of non-residential building construction in 2007 (FMI). The percentage distributions for these three series were calculated and arrayed state-by-state. The differences were examined to determine the variation across the three data sets state-by-state to identify and explain major deviations. To minimize the effects of these differences among the percentage distributes for the data sets, their percentages were averaged for each state. This average percent for all series was determined to be the best available measure to estimate each state's share of the total private and public sector non-residential construction spending in 2007. The results of these three series percentage distributions and average of all series are displayed on the attached table.

## Calculation of State Level Economic Impact

The calculation of economic impact utilizes the construction impact multipliers prepared by the Bureau of Economic Analysis (U.S. Department of Commerce) from its RIMS II input-output model. The RIMS II construction multipliers provide state-by-state and national multipliers by which the total output, personal earnings and jobs effects of direct construction spending can be calculated for each state and the nation. The results of these calculations are displayed on the attached table.

STATE	% total non-residential building construction spending (2007)	% total office, industrial, retail construction spending (2007)	% all construction employees (2007)	Average percent all series
Alabama	1.27%	1.38%	1.53%	1.40%
Alaska	0.31%	0.31%	0.24%	0.28%
Arizona	2.12%	3.61%	3.05%	2.93%
Arkansas	0.75%	0.70%	0.76%	0.74%
California	11.58%	8.01%	12.12%	10.57%
Colorado	1.95%	1.86%	2.27%	2.03%
Connecticut	1.00%	0.92%	0.93%	0.95%
Delaware	0.17%	0.09%	0.11%	0.12%
District of Columbia	0.77%	0.91%	0.17%	0.62%
Florida	6.80%	8.29%	8.12%	7.74%
Georgia	3.10%	4.62%	3.01%	3.58%
Hawaii	0.52%	0.24%	0.17%	0.31%
Idaho	0.63%	0.38%	0.71%	0.58%
Illinois	3.89%	4.33%	3.68%	3.97%
Indiana	2.68%	3.21%	2.05%	2.65%
Iowa	1.34%	2.34%	0.98%	1.55%
Kansas	0.93%	1.18%	0.88%	1.00%
Kentucky	1.38%	0.84%	1.16%	1.13%
Louisiana	1.44%	2.43%	1.82%	1.90%
Maine	0.59%	0.36%	0.42%	0.46%
Maryland	2.28%	1.53%	0.60%	1.47%
Massachusetts	2.24%	1.75%	1.86%	1.95%
Michigan	2.14%	1.62%	2.26%	2.01%
Minnesota	1.93%	1.20%	1.64%	1.59%
Mississippi	0.80%	0.96%	0.79%	0.85%
Missouri	1.76%	1.35%	2.01%	1.70%
Montana	0.13%	0.09%	0.44%	0.22%
Nebraska	0.96%	0.62%	0.15%	0.58%
Nevada	2.82%	1.50%	1.82%	2.05%
New Hampshire	0.42%	0.36%	0.38%	0.39%
New Jersey	1.65%	1.75%	2.33%	1.91%
New Mexico	0.57%	0.37%	0.80%	0.58%
New York	5.49%	5.44%	4.76%	5.23%
North Carolina	3.02%	3.28%	3.46%	3.25%
North Dakota	0.23%	0.07%	0.26%	0.18%
Ohio	2.95%	3.01%	3.05%	3.00%
Oklahoma	0.77%	0.77%	0.97%	0.84%
Oregon	0.93%	1.14%	1.41%	1.16%
Pennsylvania	3.23%	2.54%	3.57%	3.11%
Rhode Island	0.33%	0.24%	0.30%	0.29%
South Carolina	1.31%	5.41%	1.73%	2.82%
South Dakota	0.29%	0.19%	0.31%	0.26%
Tennessee	2.20%	2.28%	1.87%	2.11%
Texas	8.94%	8.66%	8.72%	8.78%
Utah	0.95%	1.42%	1.42%	1.26%
Vermont	0.11%	0.09%	0.23%	0.14%
Virginia	3.25%	2.22%	3.27%	2.91%
Washington	2.84%	2.48%	2.82%	2.71%
West Virginia	0.46%	0.16%	0.53%	0.38%
Wisconsin	1.46%	1.44%	1.71%	1.53%
Wyoming	0.33%	0.04%	0.36%	0.24%
	100.00%	100.00%	100.00%	100.00%