

Experimental Estimates for State-Level Personal Consumption Expenditures

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Outline

- Motivation and Concepts
- Methodology and Data Sources
- Key Data Quality Questions
- Highlights of Results
- Next Steps for the Prototype Estimates
- Discussion Question: Uses of the Statistics



Motivation for State-level PCE Statistics

- Uses of geographic PCE statistics
 - Fiscal policy, regional macro and I-O analysis
 - Geographic marketing information
 - Consumption as a measure of economic well-being
- Existing approaches to PCE-by-state measures
 - Retail sales
 - State tax receipts
 - National PCE totals scaled to population or income

Methodological Approach

- Create nominal annual state expenditures for detailed categories
 - Consumer-based data from Census and other sources
 - Business-based Economic Census data for many goods and services
- Supplement with correlated detailed data series
- Scale expenditures to NIPA PCE category totals
- Aggregate to 16 categories
- Evaluate and adjust if necessary for state of residency

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Two Data Challenges

- Are QCEW data good for extrapolation?
- Is a residency adjustment needed for supply-based receipts?

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Correlations of QCEW and EC Receipts

NAICS	Industry Description	Levels			Compound Annual Growth Rates	
		1997	2002	2007	1997-2002	2002-2007
4421	Furniture stores	0.99	0.99	1.00	0.63	0.68
4481	Clothing stores	0.99	0.99	0.99	0.70	0.63
5411	Legal services	0.99	0.99	0.99	0.78	0.59
6212	Offices of dentists	0.99	1.00	1.00	0.66	0.56
7221	Full-service restaurants	1.00	1.00	1.00	0.69	0.75
8121	Personal care services	0.99	0.99	0.99	0.79	0.87
8123	Drycleaning and laundry services	0.99	0.99	0.99	0.53	0.63

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Analytical Ratios

1. State PCE to state population
2. State PCE to state disposable personal income
3. State ratio of household spending to business receipts
 - Budget shares calculated with two different data sources
 - Household survey data by category, adjusted to national accounts totals
 - Economic Census receipts by category, adjusted with class of customer shares and national accounts totals

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Residency Adjustment

- Adjust for residency
 - Sufficient evidence of out-of-state spending
 - A good category match available in the consumer-expenditure-based data
- Replace Census-based share with survey-based share
 - Scale to national accounts totals
 - Maintain state time series trend of Census-based data

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Example: Analytical Ratios

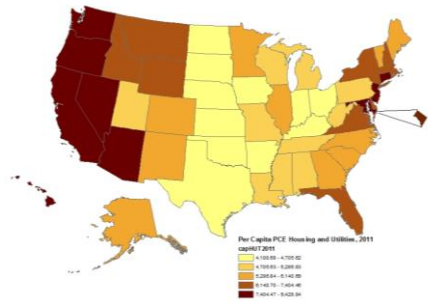
Food Service and Accommodations, 2007

State	Per Capita	Difference from U.S. Value	Per Dollar of Disposable Income	Difference from U.S. Value	CE to EC Expenditure Share Ratio
United States	\$1,993.48	0.00%	0.058	0.00%	1.000
Illinois	\$2,013.16	0.99%	0.055	-4.57%	1.002
Nevada	\$6,036.96	202.84%	0.171	195.96%	0.279

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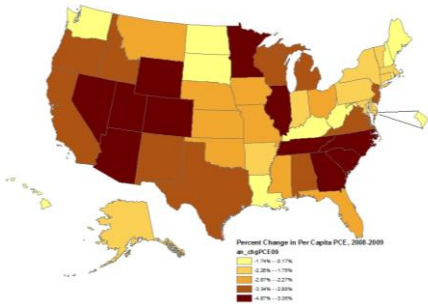
Housing and Utilities, 2011



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PCE Growth in the 2008-2009 Recession



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Next Steps



- 2014 Goals
 - August release of “prototype statistics” for 1997-2012
 - Incorporate methodological improvements
 - Continue to solicit feedback from external users
- Longer term work
 - Extend detail categories
 - Develop state-level PCE deflators

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- Working Paper:
<http://www.bea.gov/papers/pdf/Experimental%20PCE-by-State%20Statistics.pdf>
- Survey Article:
<http://www.bea.gov/papers/pdf/Experimental%20PCE-by-State%20Statistics.pdf>
- Questions: carol.robbins@bea.gov
