Personal Consumption Expenditures by State: Source Data, Methodology, and Preliminary Results

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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
  ▪ Household survey data
  ▪ Scale national totals to population or income
Contribution

- Comprehensiveness
  - Nominal expenditures for 16 major PCE categories
  - Both goods and services
  - Prepared at more detailed level and aggregated to major categories

- Consistency
  - Annual time series 1997-2007, extrapolating to 2011
  - NIPA definitions and concepts
  - Retain key data sources for NIPA estimates
  - With other BEA regional statistics

- A method to evaluate the statistics and to adjust for out-of-state spending in receipts-based data
Personal Consumption Expenditures

- Accounting framework aligns state personal income and expenditures

- PCE includes
  - Out-of-pocket household spending
  - Spending on behalf of households
  - Imputations
    - Owner-occupied housing
    - Financial services without explicit payment
  - Net expenditures of non-profit institutions serving households
State-level Data Sources for PCE

- Receipts-based
  - Economic Census
    - Retail sales, Service sector receipts, Census of Governments
  - BLS Quarterly Census of Employment and Wages

- Price times Quantity
  - Decennial Census data
  - American Community Survey
  - Administrative records and regulatory data

- When all else fails
  - BEA state personal income
Integrating QCEW with Economic Census Data

Food Services and Accommodations, 2007

$ millions

Extrapolation from 2002 BM - FSA
Benchmarked Estimates - FSA
Average PCE Growth, 1997-2007
PCE Growth in the 2000-2001 Recession

Map showing the per capita PCE growth in the 2000-2001 recession across different states. The map uses a color scale ranging from light yellow (0.015 - 0.023) to dark red (0.051 - 0.068) to indicate the level of growth.
Evaluation Procedure

▪ For each category of spending
  ▪ Calculate three analytical ratios
  ▪ Examine the outliers
    ▪ Top and bottom 10%
    ▪ 20% most extreme absolute values
  ▪ Look for economic reasons for outliers
    ▪ Disposable personal income
    ▪ Relative prices
    ▪ Demographics and regional preferences
    ▪ Out-of-state spending
Adjust extreme outliers when

- Evidence for economic reason exists
- A good category match is available in the consumer-expenditure-based data

Replace Census-based share with survey-based share

- Scaled to national accounts totals
- Maintain state time series trend of Census data
Unadjusted and Residency-adjusted Expenditures

Food Services and Accommodations, 2007

Per capita pce  Per capita residency-adjusted pce
Next Steps

- Solicit feedback on methodology and potential uses
  - Working paper
  - Survey of Current Business article

- Extend experimental estimates to 2011
  - Show impact of Great Recession by category

- Longer term work
  - Improve housing and financial services estimates
  - Consider potential for greater detail for key sectors

- Questions?
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