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What is going on with public pensions? What are the options?

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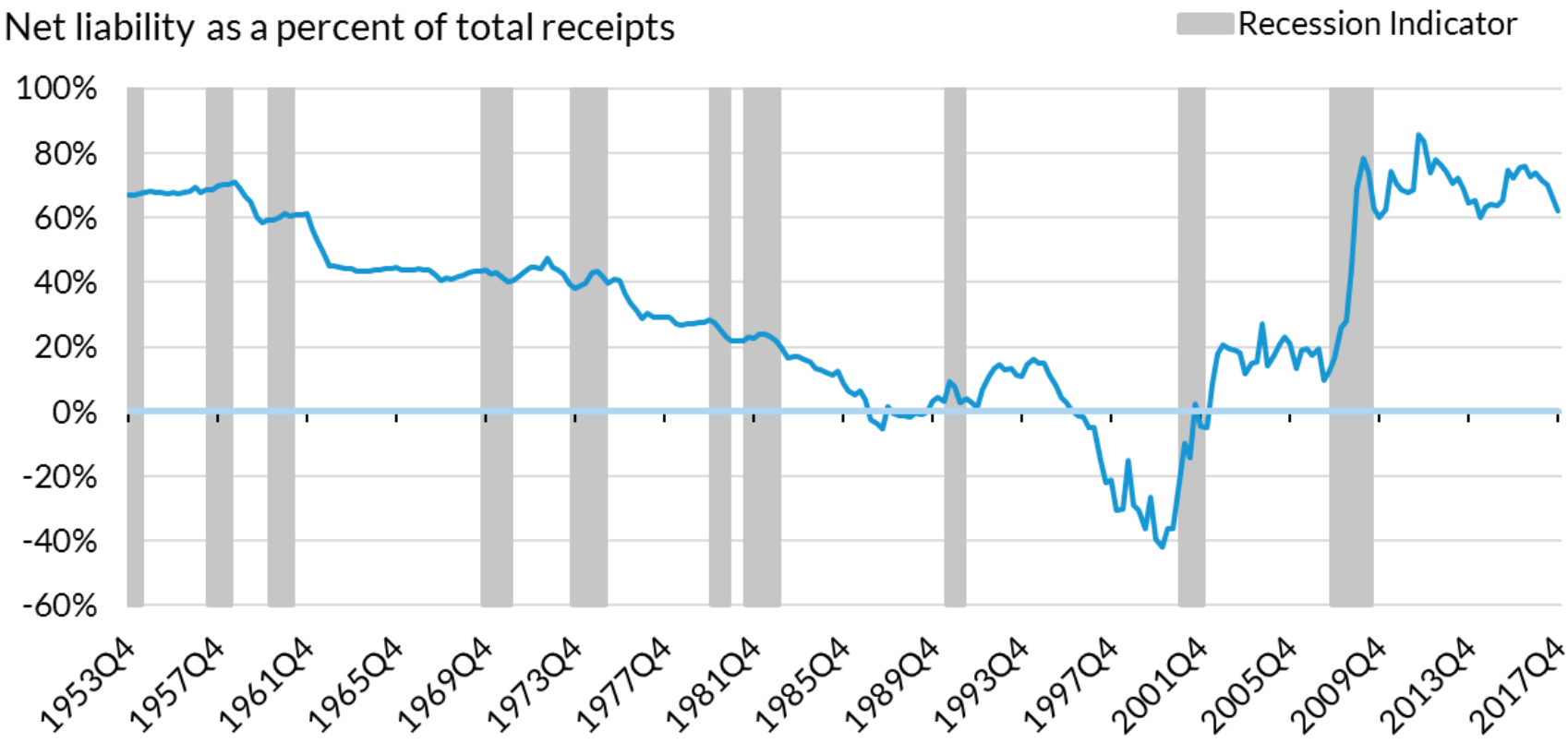
Navigating Pension Reform in Illinois: What Lies Ahead?

April 17, 2018

Federal Reserve Bank of Chicago

Although states have undertaken reforms, unfunded pension liabilities remain high

State and Local Employee Defined Benefit Pension Funds



Source: Federal Reserve Board, Financial Accounts of the United States, US Bureau of Economic Analysis, and NBER recession indicators.

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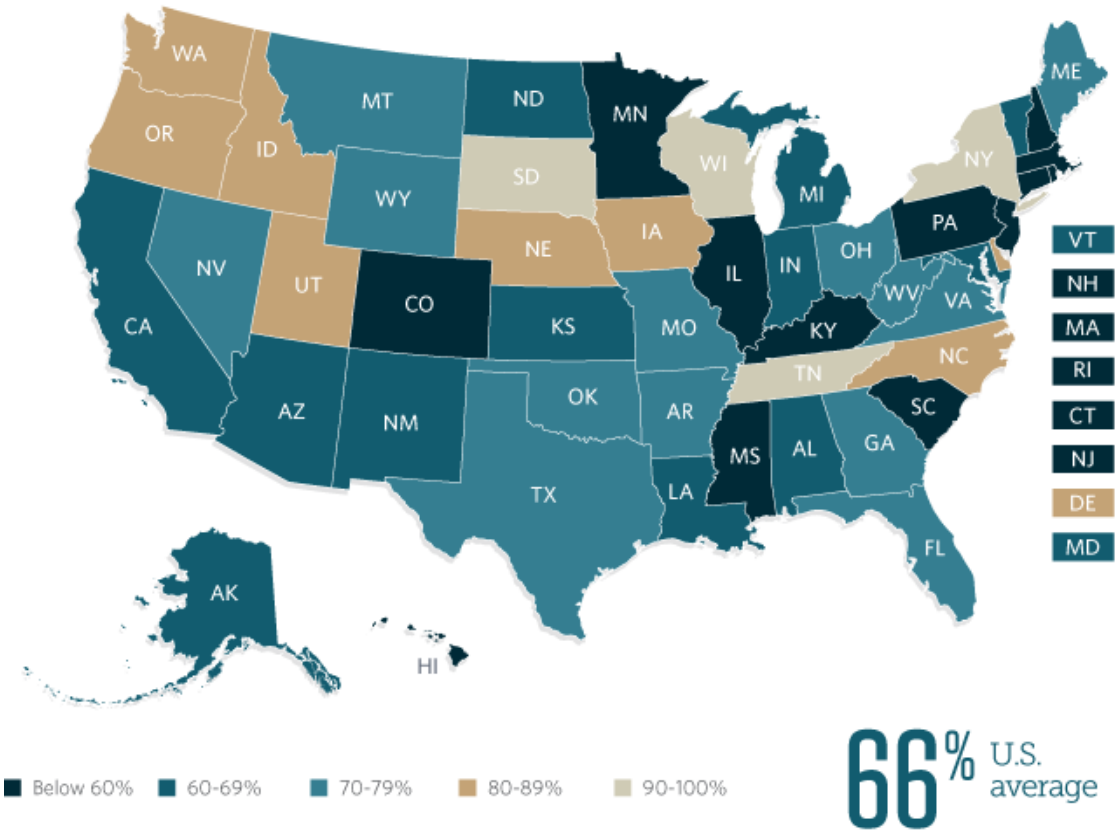
Illinois has some of the lowest funded ratios

Figure 1

Funded Ratios for State Pension Plans, 2016

Only 4 states had at least 90% of the assets needed to pay promised benefits



Note: Percentages reflect 2016 Governmental Accounting Standards Board reporting standards.

Sources: Comprehensive annual financial reports, actuarial reports and valuations, other public documents, or as provided by plan officials

Source: Pew Charitable Trusts, 2018

Many proposed solutions

- **State**
  - Move new hires to 401(k)-style, hybrid, or cash balance plans
  - Change benefit formula for new hires
  - Reduce COLAs for existing retirees
  - Increase employer, employee contributions
  - Lump sum buy outs
  - Bankruptcy-style restructuring
  - Pension obligation bonds (convert implicit to explicit liability, usually with reforms, NOT arbitrage)

Many proposed solutions

- **Federal**
  - Direct aid, loans, guarantees
  - Require enhanced disclosure as condition of tax-exempt bond authority
  - Allow tax exempt POBs under certain conditions
  - Introduce deferred annuities, new insurance product
  - Create PBGC for public sector, mandatory funding
  - Expand access to bankruptcy

All solutions have challenges, but a common theme is where to find the money

Mutually exclusive means of raising incremental revenues required to meet full accrual payments to retirees

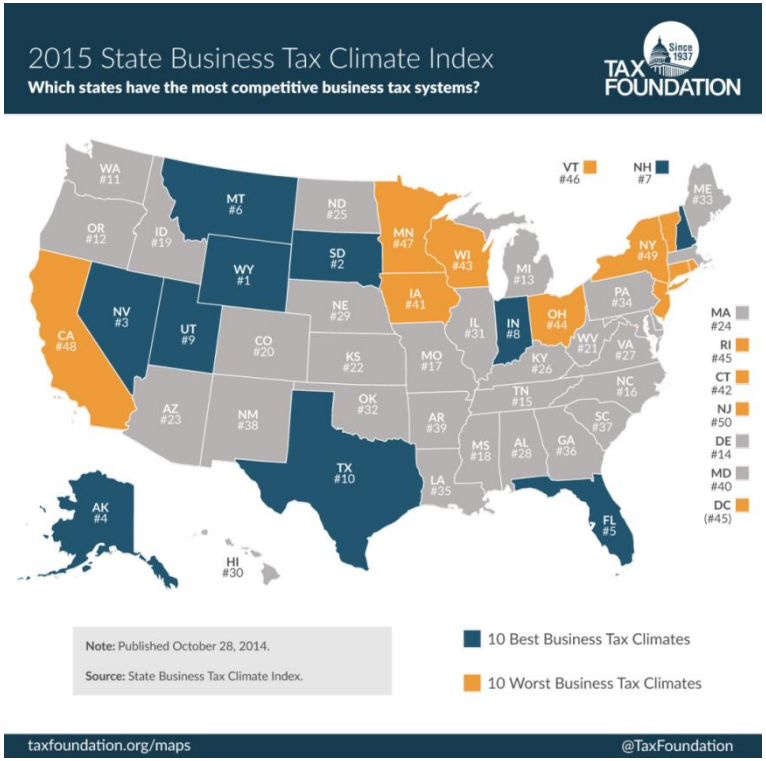
IPOD = % of state revenues req. to pay interest on bonds, state share of unfunded pension and OPEB liabilities, and defined contribution pmts

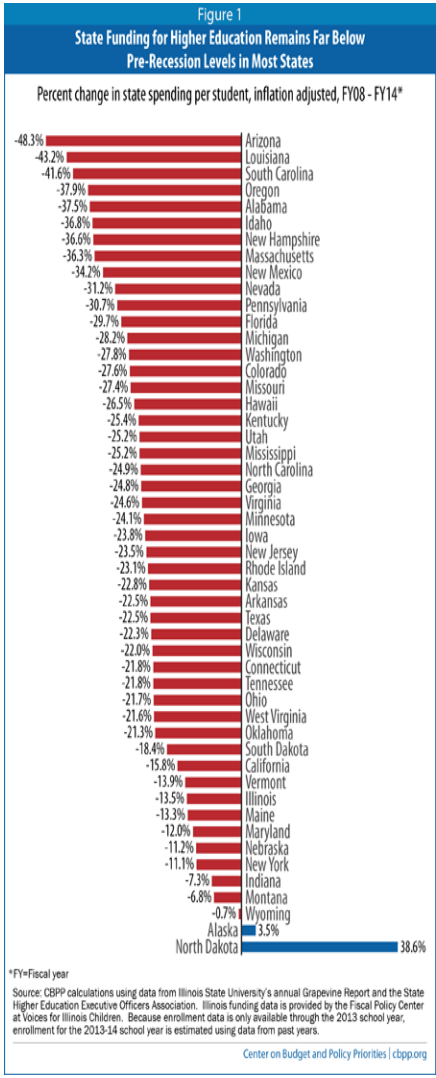
State	Current IPOD ratio		Full accrual IPOD ratio	Increase in revenues (taxes)		Cuts in direct spending		Increase in worker contributions
IL	22%	→	39%	17%	*or*	16%	*or*	400%
NJ	12%	→	38%	26%	*or*	24%	*or*	471%
CT	21%	→	35%	14%	*or*	14%	*or*	699%
KY	11%	→	32%	20%	*or*	13%	*or*	435%
HI	15%	→	24%	8%	*or*	6%	*or*	327%
MA	14%	→	22%	7%	*or*	6%	*or*	164%

Source: JP Morgan, 2016

How to think about state revenue capacity

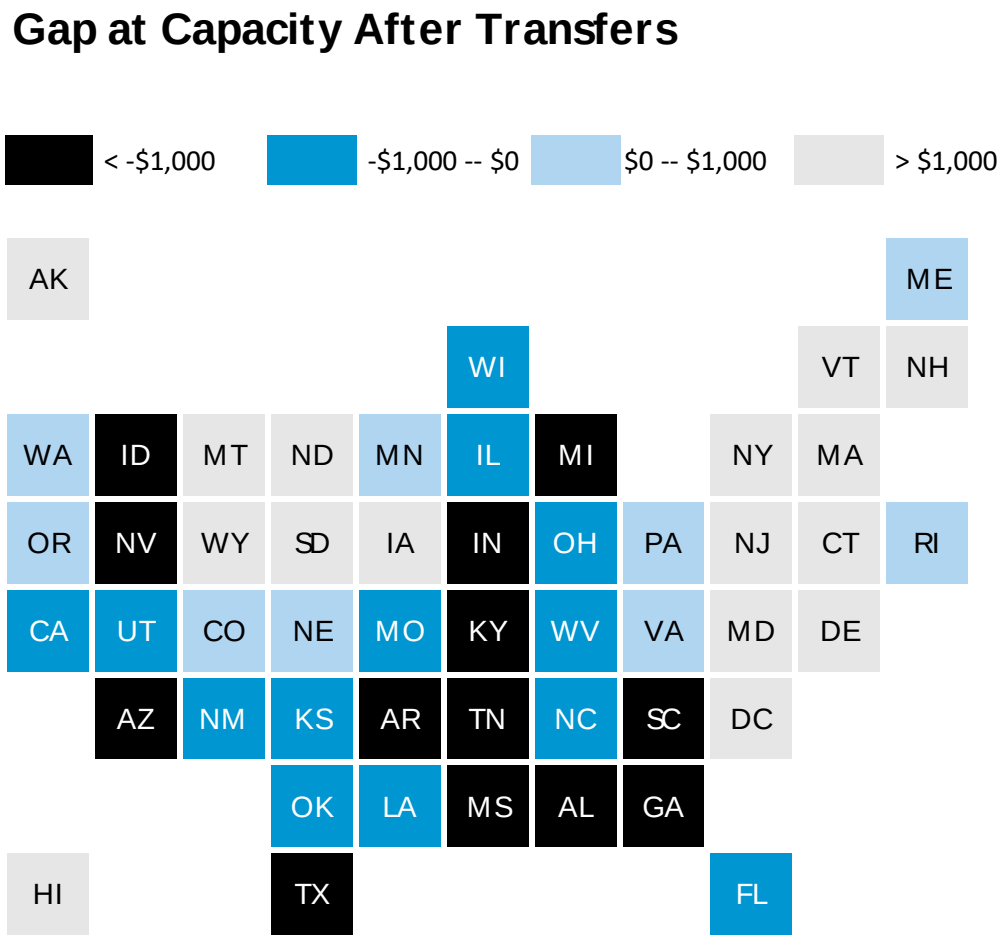
- Commonly used metrics like per capita taxes and spending or business climate indexes not helpful
- They fail to distinguish between ***policy choices*** and ***background conditions***





Representative Revenue/Expenditure System aims to solve this problem

- For each major revenue source, it multiplies US average tax or fee assessment rate by state base = ***revenue capacity***
- Then multiplies US average per capita spending by state population, adjusts for demographics and costs = ***expenditure need***
- Difference = ***fiscal gap at capacity***
- Add federal grants



Source: Urban Institute calculations
Note: Gap at capacity after transfers equals a state's revenue capcity plus federal transfers minus expenditure need.

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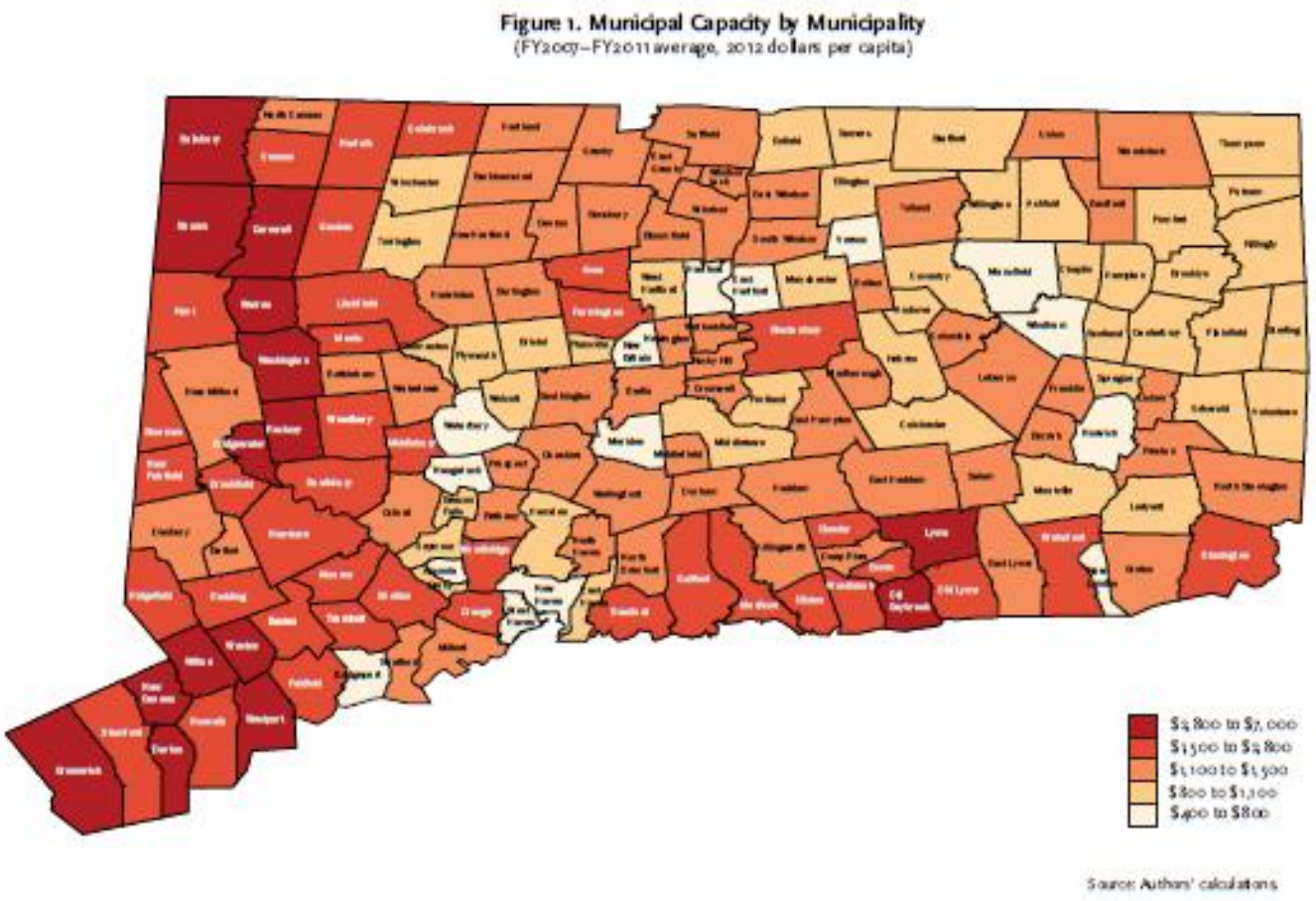
An example from Illinois in 2012*

• Actual own-source revenues	$6,753	
• Calculated revenue capacity	$6,685	$6,685
• Revenue effort (i.e., they are collecting more than averages predict)	$ 68	
• Actual direct general expenditures	$8,272	
• Calculated expenditure need	$8,472	$8,472
• Fiscal gap at capacity		- $1,787
• Federal grants		$1,482
• Fiscal gap at capacity after transfers		-$ 305

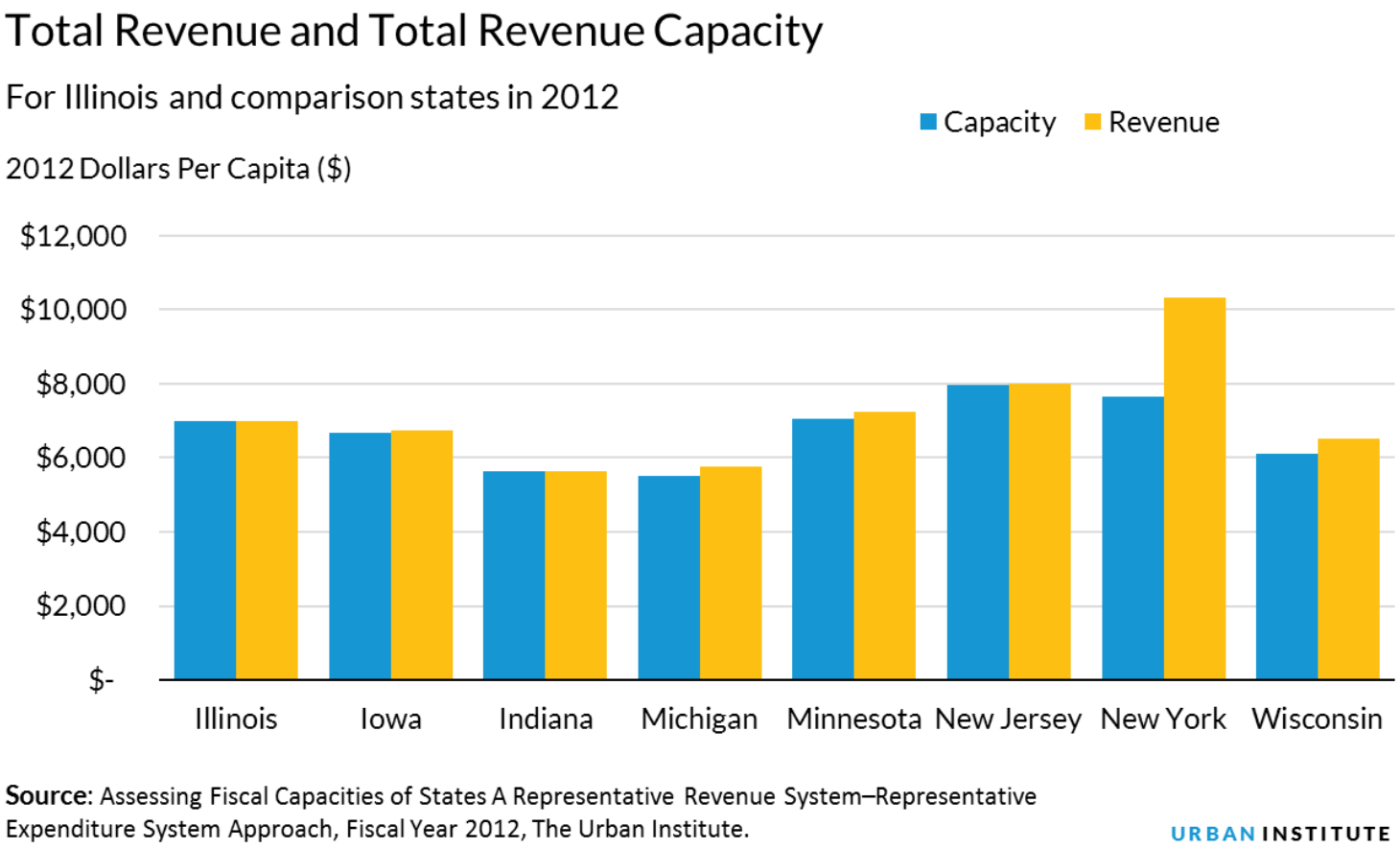
* = results from *Assessing Fiscal Capacities of States*, more in Appendix

Approach may also be applied locally, e.g., Connecticut Tax Commission



Source: Zhao and Weiner, 2015

Results for Illinois and other states



Source: Assessing Fiscal Capacities of States A Representative Revenue System–Representative Expenditure System Approach, Fiscal Year 2012, The Urban Institute.

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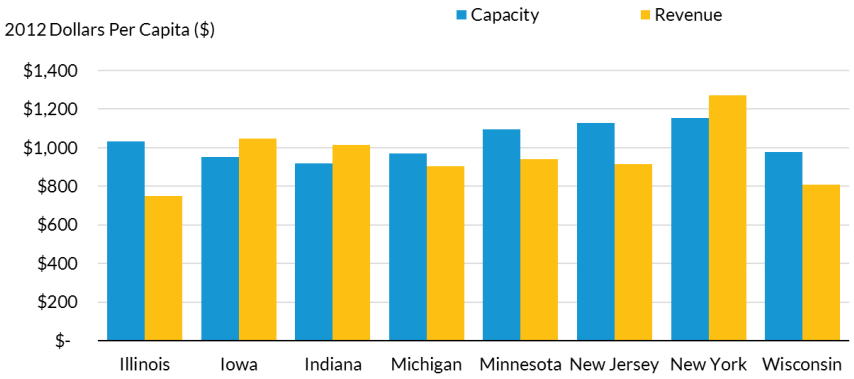
Results vary by revenue source

General Sales Tax Revenue and Revenue Capacity

For Illinois and comparison states in 2012



Source: Assessing Fiscal Capacities of States A Representative Revenue System–Representative Expenditure System Approach, Fiscal Year 2012, The Urban Institute.

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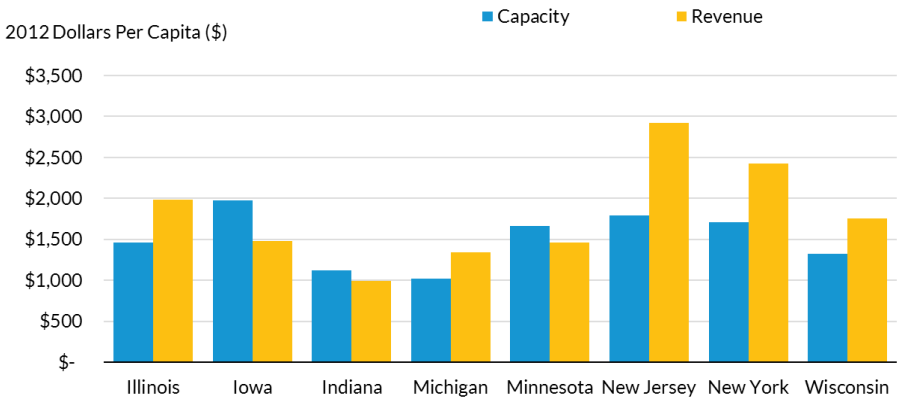
Property Tax Revenue and Revenue Capacity

For Illinois and comparison states in 2012



Source: Assessing Fiscal Capacities of States A Representative Revenue System–Representative Expenditure System Approach, Fiscal Year 2012, The Urban Institute.

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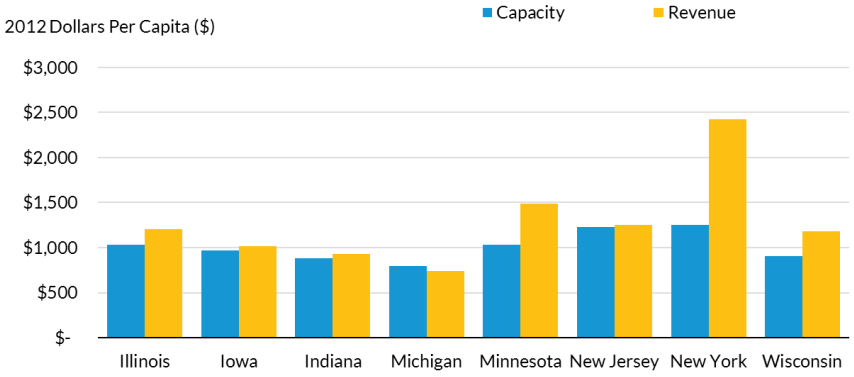
Individual Income Tax Revenue and Revenue Capacity

For Illinois and comparison states in 2012



Source: Assessing Fiscal Capacities of States A Representative Revenue System–Representative Expenditure System Approach, Fiscal Year 2012, The Urban Institute.

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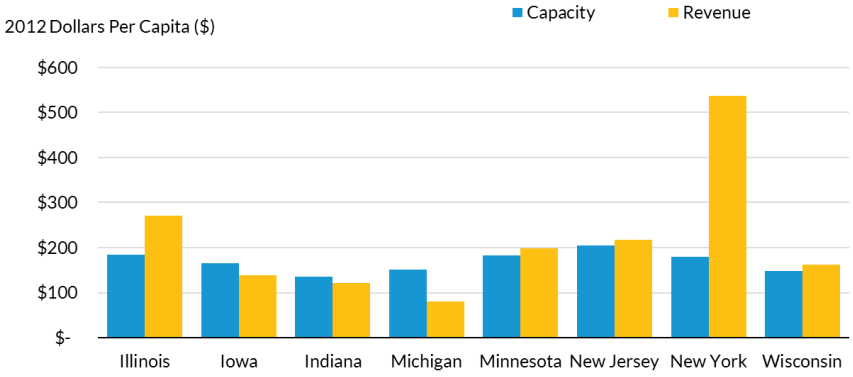
Corporate Income Tax Revenue and Revenue Capacity

For Illinois and comparison states in 2012



Source: Assessing Fiscal Capacities of States A Representative Revenue System–Representative Expenditure System Approach, Fiscal Year 2012, The Urban Institute.

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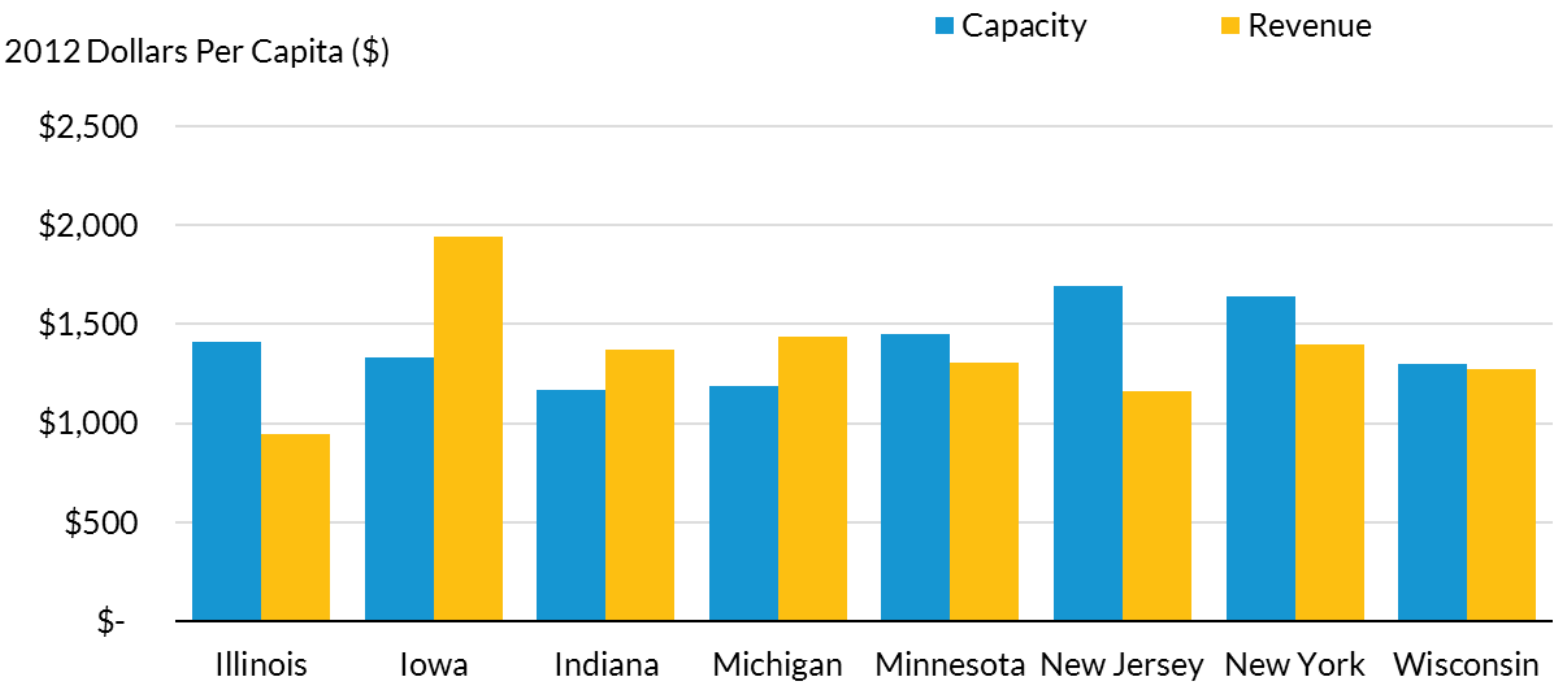
And fees are different

General Charges Revenue and Revenue Capacity

For Illinois and comparison states in 2012



Source: Assessing Fiscal Capacities of States A Representative Revenue System–Representative Expenditure System Approach, Fiscal Year 2012, The Urban Institute.

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There are many alternative benchmarking methods

Category	Concept	Source	Method	Indicators
Economic				
	Index of Center City Hardship	Nathan and Adams (1976)	Urban to suburban ratios, weighted	Unemployment, dependency of population, education, income, crowded housing, poverty
	Indices of Social, Economic and Fiscal Need	CBO (1978)	Composite scores from point-in-time indicators and outside indices	Social Need: Nathan and Adams index, plus unemployment and per capita income Economic: 6 indicators Fiscal effort: tax effort, property tax base, and two comprehensive measures developed by HUD
	Fiscal Capacity	ACIR (1971)	Representative Revenue System	Revenues collected divided by revenue capacity
		ACIR (1977)	Fiscal Pressure	Tax effort divided by change in tax effort
	Need-capacity Gap	Ladd and Yinger (1989), Ratcliffe, Riddle & Yinger (1990), Reschovsky (1993)	Revenue-raising capacity minus standardized expenditure need, expressed as a % of capacity	Standardized expenditure need from costing functions, regressions, and environmental cost factors Revenue capacity is revenue that can be raised by applying a uniform tax burden, as a % of resident income

Alternatives, cont'd

Fiscal & Financial				
	Urban Fiscal Strain	Treasury (1978)	Average change in weighted variables; combined with other indices	Population, per capita income, own-source revenue burden, long-term debt per capita, property value (full market)
	Fiscal stress warning signs	ACIR (1973)	Based on qualitative evaluation of cities' financial status	One-year operations, continuous operations, working capital, short-term operating loan balance, property tax delinquency, property valuation
	Fiscal strain	Clarke and Ferguson (1983)	Measure based on fiscal outputs divided by population indicators. Produces twenty separate indicators.	Fiscal outputs include general expenditures, own revenues, common functions, and debt. Population factors include median family income, population change, and city wealth index
	Financial Condition Ratios	Aronson & King (1978)	Focus on debt-serve combined a rising ratio of debt service to income	Seven ratios, focused on debt, debt service and income
		Brown (1993)	10-Point Scale	Total revenues/population, own-source General Fund (GF) Revenues /GF revenue, GF sources from other funds/Total GF sources, OpEx/Total expenditures Total revenue/total expenditures, Unreserved GF Balance/GF revenues GF cash and investments/GF liabilities, GF liabilities/GF

Yet more alternatives

Comprehensive				
	Fiscal Trend Monitoring System (FTMS)	International City/County Managers (ICAMA, 1980) Groves and Valente (1994) Nolleberger (2003)	36 individual indicators across 7 categories, measure them each individually over time.	7 categories: Revenue, expenditure, operating position, debt, unfunded liability, capital plant, and community needs and resources
		Groves, Godsey, and Shulman (1981)	ICMA FTMS	Ask city representatives in 50 cities to use and give feedback on ICMA FTMS.
		Hendrick (2004)	Three-dimensional fiscal health measurement. Spending needs and revenue wealth, balance with the environment, and fiscal slack	Revenue wealth and spending need indicators obtained through regression analysis, similar to Ladd and Yinger. Fiscal balance is revenue/wealth and spending/need Fiscal slack is % unreserved fund balance, % capital expenditures, % enterprise income, and % debt service

The point is that tools are available

- However, analytical tools do not supplant the need to make difficult choices, value judgments
- Making case for additional revenues is difficult when services were rendered years decades earlier
- Beneficiaries of services may no longer live in community where they were provided
- Argues for generalizing cost to a larger population, e.g., state or national level although politically fraught

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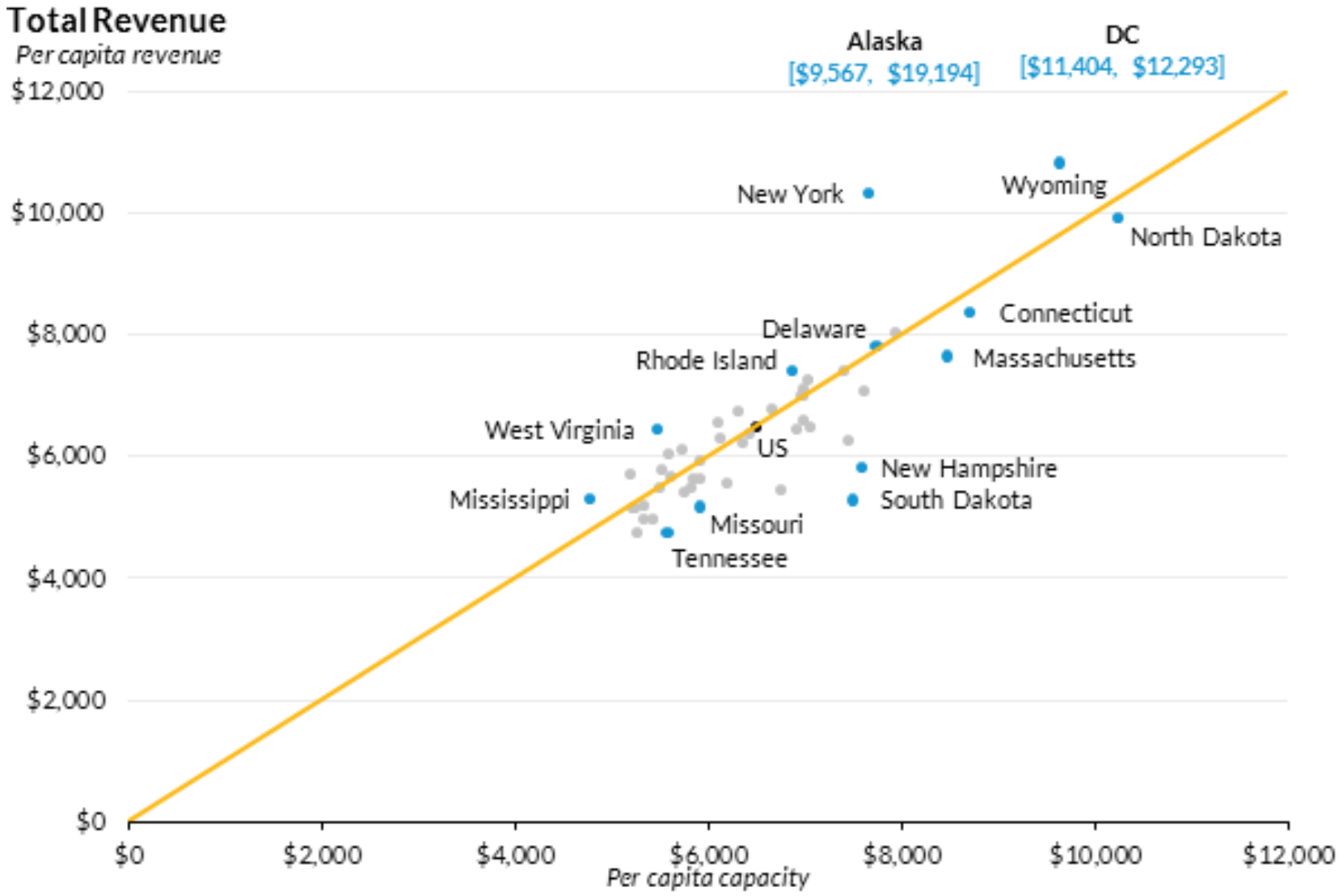
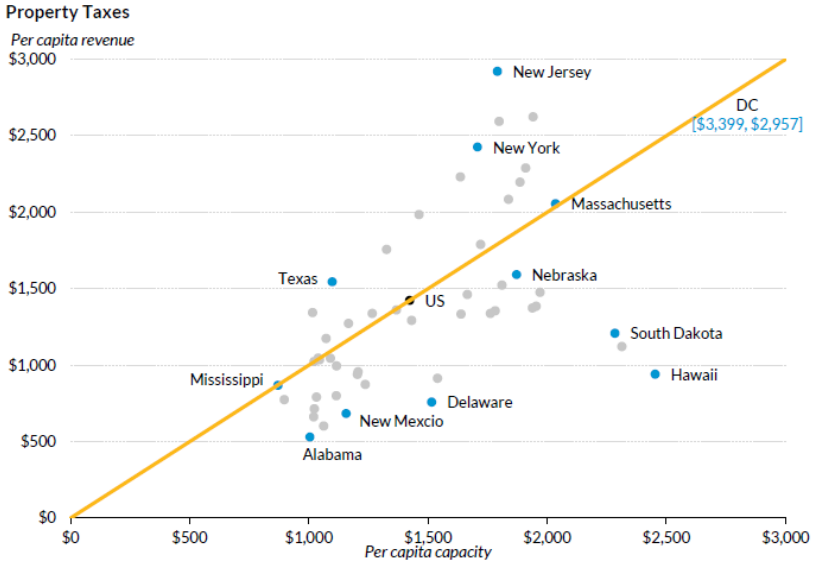
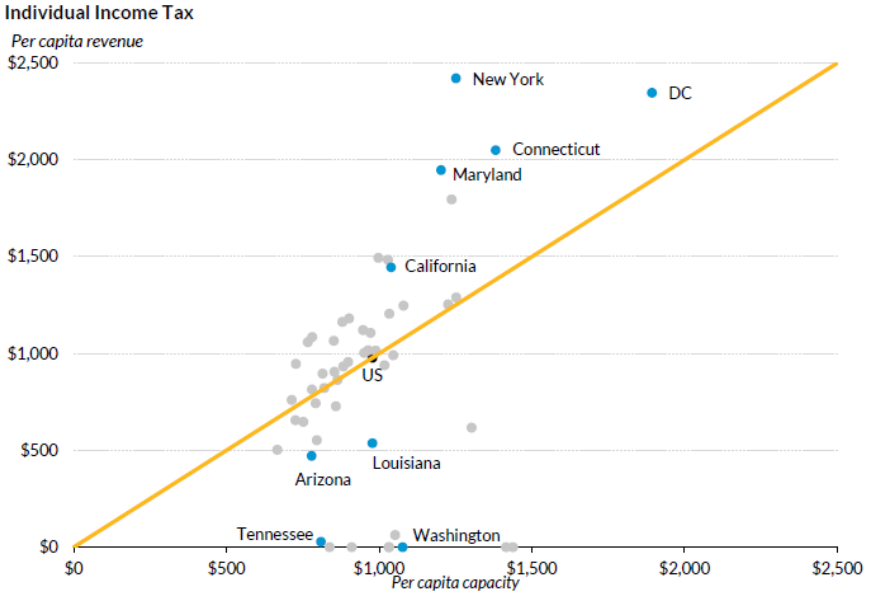
Appendix

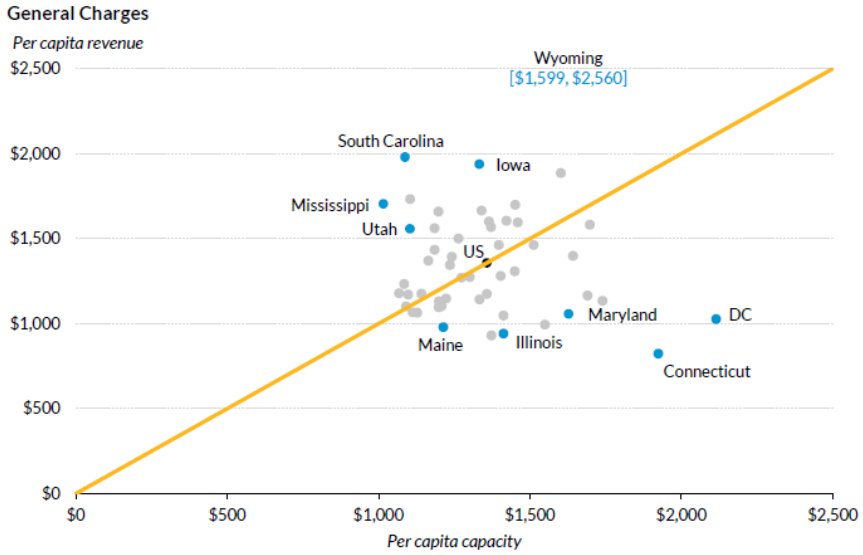
How often do actual revenues line up with capacity?



Results vary by revenue source







For expenditures…

- The method allocates national spending to states based on:
  - Input Cost Index, or relative price of workers based on education level
  - Workload Factors, or need by expenditure area

$$\frac{National\ Spending\ *Input\ Cost\ Index\ *Workload\ Factor}{Population} = Representative\ Expenditure\ PerCapita$$

Input Cost Index

National ratio of payroll to expenditures times 1.25 equals Compensation Share for each expenditure group.

Median state earnings over median national earnings per education level equals Labor Cost Index.

For each expenditure group, choose a education level. For each state, multiply the compensation share by the relevant labor cost index. That adjusted compensation share plus the non-compensation share is the Input Cost Index.

Input Cost Index for K-12

Payroll spending on K-12 Education is 46% of total spending. The Compensation Share is 46% *1.25 = 62%.

Calculate state median income divided by national median income for each education group. CA is 1.14 for college graduates, for example, giving it higher labor costs.

We match K-12 education with college-educated workers. So for CA, we would multiply 62% * 1.14, then add in (1-62%) to get an Input Cost Index of 108.85%.

RES Workload Factors

What drives state spending need?

- Using academic lit, select a way to identify state-specific need. The state's share of the national total is its workload factor.

How much is the nation spending in an expenditure area?

- We look at census of governments expenditure data to get a total of state-level spending on some area.

What is a state's workload factor adjusted expenditure?

- For each state, multiply its workload factor for that expenditure group by total spending nationwide.

K-12 Spending Need.

- K-12 Spending is based on the number of students and low-income students.
- We measure need as a weighted average of the two.
- CA has 12.8% of weighted children.

National spending on K-12 Education.

- In 2012, states spent a total of $566 billion on K-12 Education

State K-12 workload factor adjusted spending.

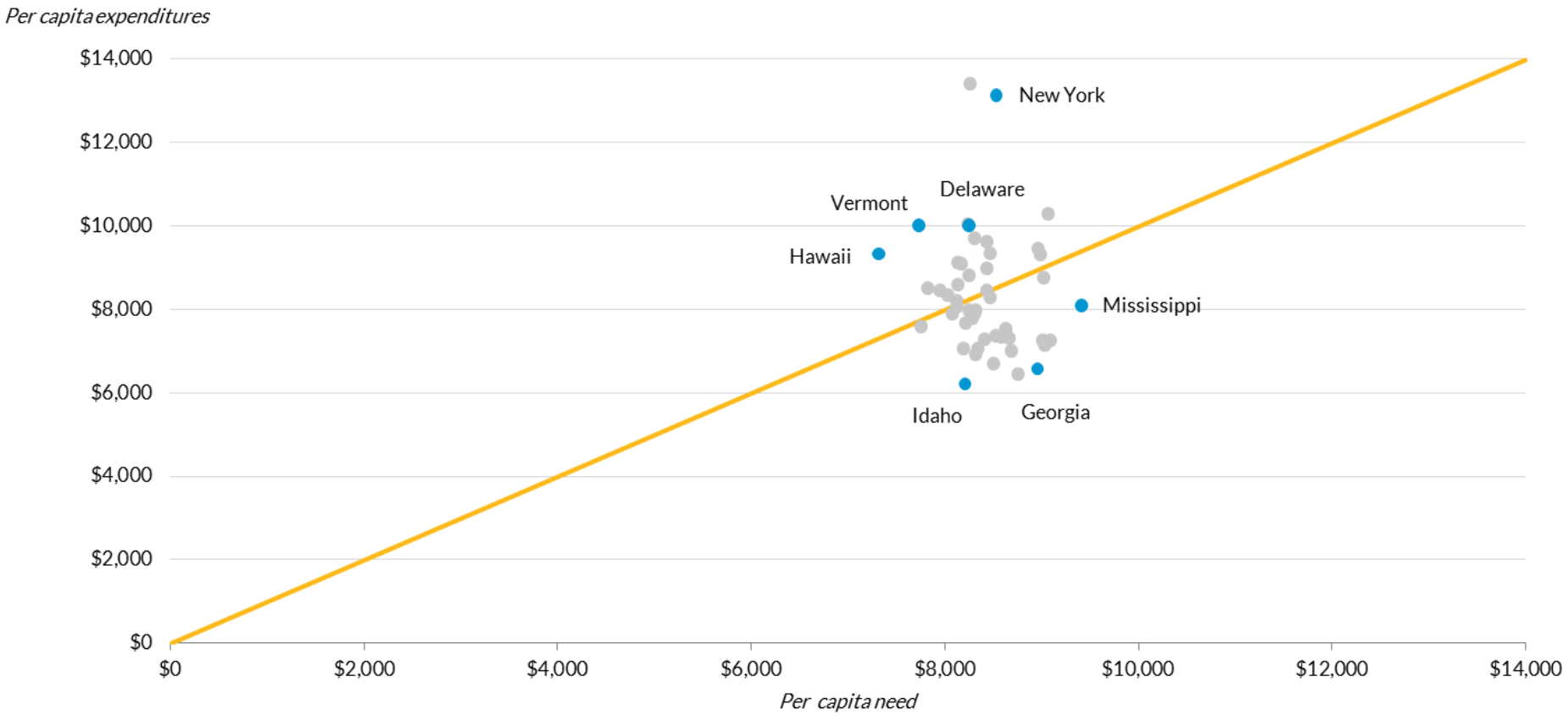
- Multiply the state workload factor by total spending (and by the Input Cost Index).
- $566 Billion * 12.8% = $72 Billion
- $72 Billion * 108.85% = $78 Billion (or $2,074 per capita)

How often do actual expenditures line up with need?

FIGURE 20

Total Expenditures

Per capita expenditures plotted against per capita need, 2012



Source: Gordon, Auxier and Iselin 2016, figure 20

Notes: DC ($8,907, $20,548) and Alaska ($8,213, $17,359) are outliers are are excluded from this figure.

As with revenues, results will vary by spending type

FIGURE 21

Elementary and Secondary Education

FIGURE 22

Higher Education

FIGURE 23

Health and Hospitals

FIGURE 24

Highways

Vary by spending type, cont'd

FIGURE 24

Police and Corrections

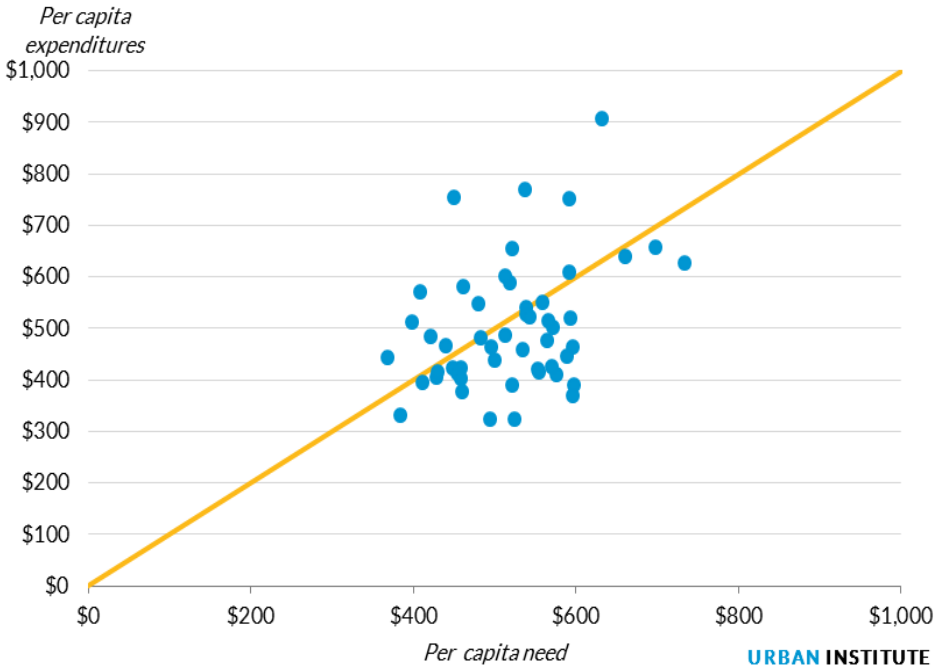


FIGURE 26

Public Welfare