

Harris School of Public Policy
University of Chicago
PPHA 32100

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Spring 2015: State and local public finance PPHA 32100

Background: This one-quarter class in the economics of state and local governments covers topics such as property, sales, and income taxation, as well as nontax revenue sources such as lotteries and user fees; intergovernmental grants; education finance; capital projects and debt finance; and local economic development.

Goals of class: Use applied tools of microeconomics to analyze spending and revenue-raising choices of state and local governments in the United States. Use Tiebout local public goods framework to motivate rationale for local government service provision. Assess the efficiency and equity properties of income, sales and excise, and property taxes and nontax revenue sources. Analyze the economics of selected locally provided services and programs (e.g., primary and secondary education; Medicaid). Discuss infrastructure needs, financing, and privatization options. Review status of state and local government pension plans. Assess the consequences of local economic development policies. If time, discuss developments in the area of municipal bankruptcy.

Prerequisites: Pre-requisites for the courses are the two-quarter core sequence in microeconomics, PP32300 and PP32400, or their equivalent.

Relationship to Certificate in Municipal Finance: This course is one of four required courses for completion of the certificate. More information may be found at <http://harrisschool.uchicago.edu/degrees/certificate-programs>.

Format of class: Lectures, discussions, and student presentations. We meet on Tuesdays and Thursdays in room 140-C, 10:30 to 11:50 am.

Office Hours: By appointment. The course TAs will be Pallavi Vyas (pvyas@uchicago.edu) and Isaura Zelaya Favila (izelayaf@chicagobooth.edu). They will hold regular office hours and will be responsible for some of the grading this term.

Use of web and email: I will post course materials to the university's "chalk" web-based course management system: the URL is <http://chalk.uchicago.edu>. Students are responsible for any and all material posted there. I encourage the use of email and try to respond in a timely fashion. My email address is pworthington@uchicago.edu. I do not text, tweet, or Facebook message regarding course matters, so *please check your email regularly*. I will use Chalk's internal email lists, so that means *checking your University address*.

Academic integrity: Just a reminder about the importance of meeting the University's expectations regarding academic integrity: from the University's *Student Manual of University Policies and Regulations: Student Conduct* <http://studentmanual.uchicago.edu/Policies>

It is contrary to justice, to academic integrity, and to the spirit of intellectual inquiry to submit the statements or ideas of work of others as one's own. To do so is plagiarism or cheating, offenses punishable under the University's disciplinary system. Because these offenses undercut the distinctive moral and intellectual character of the University, we take them very seriously and punishments for them may include expulsion from the University.

Proper acknowledgment of another's ideas, whether by direct quotation or paraphrase, is expected. In particular, if any written or electronic source is consulted and material is used from that source, directly or indirectly, the source should be identified by author, title, and page number. Any doubts about what constitutes "use" should be addressed to the instructor.

Please note that these expectations apply to all class work, in which your submitted work represents your commitment that it is your own independent work and that you have relied on no other individuals or resources, except as explicitly specified in the assignment instructions, in producing this work.

Professionalism: Students are expected to act with professionalism and respect throughout this course. This includes, but is not limited to, being on time to class and for any outside-the-classroom study group meetings; not sending email, updating Facebook status, tweeting, texting, or engaging in other electronic communications during class sessions; using laptops in class only for the purpose of taking notes; bringing name placards to class each day; and generally acting in a fashion consistent with the young professionals you are now becoming. In fact, I encourage each of you to read these recent articles in the *Wall Street Journal* and the *New York Times*:
<http://online.wsj.com/article/SB10001424127887324577304579054922229616730.html> and
<http://www.nytimes.com/2013/09/29/fashion/technology-and-the-college-generation.html?ref=style>.

Students with disabilities: Any students requesting accommodations related to disabilities should contact me to make proper arrangements. Please be prepared to share your documentation from the Dean of Students regarding appropriate accommodations.

Name cards: I will distribute name "tents" to all students in the class; please bring these and use them each day in class so I can learn your names more quickly.

Student assignments and projects: Individual assignments will include four short memos; a midterm exam; and a final group project which includes both presentation and written components. A tentative list of dates and grading weights follows:

- Short memos
 - Texas budget memo 5% Thursday, April 2
 - Fiscally standardized cities memo 10% Thursday, April 23
 - Education finance memo 10% Thursday, May 14
 - Public pensions memo 10% Thursday, May 28
- Midterm exam 35% Tuesday, May 19
- Group presentations 10% Tuesday & Thursday, June 2 & 4
- Group paper 10% Monday, June 8

These grading weights sum to 90%, leaving 10% for “soft” items including class participation, professionalism, attendance, and overall engagement. Students taking the class pass/fail must complete all assignments and receive passing grades to receive a “pass” grade for the course.

Notes:

- *Memo dates were revised during the term, with the education finance memo due on Thursday, May 28, worth 20% of course grade, and the pensions memo removed.*
- *Dates on which topics were covered shifted slightly, but order of topics was as presented below.*

**Spring 2015: State and local public finance PPHA 32100
Readings and Schedule**

No books are required for this class; readings are available via live links below or, in a few instances, be posted as pdfs to Chalk; please check the on-line library course reserves for the course, or, in some rare cases, the Course Documents folder in Chalk.

1. **Tuesday, March 31: What *do* state and local governments do? What *should* they do?**

- a. Barnett, Jeffrey L.; Cindy L. Sheckells; Scott Peterson; and Elizabeth M. Tydings, "2012 Census of Governments: Finance–State and Local Government Summary Report," U.S. Census Bureau, December 17, 2014; http://www2.census.gov/govs/local/summary_report.pdf.
- b. Glaeser, Edward L., "Urban Public Finance," National Bureau of Economic Research Working Paper 18244, July 2012; <http://www.nber.org/papers/w18244> [note: this is a long paper covering practically the entirety of this class, so you will want to read sections of it throughout the quarter!]

2. **Thursday, April 2: Demand for local public services**

- a. Tiebout, Charles, "A Pure Theory of Local Expenditures," *Journal of Political Economy* 64 (October 1956, pp. 416-424).
 - b. Corcoran, Sean, and William N. Evans, "Income Inequality, the Median Voter, and the Support for Public Education," manuscript, September 2011, https://www3.nd.edu/~wevans1/working_papers/corcoran_evans_revision_JP_UBECON_resubmission.pdf
 - c. Boustan, Leah; Fernando Ferreira; Hernan Winkler; and Eric M. Zolt, "The Effect of Rising Income Inequality on Taxation and Public Expenditures: Evidence from US Municipalities and School Districts, 1970-2000," *Review of Economics and Statistics* October 2013, 95(4): 1291–1302; http://www.econ.ucla.edu/lboustan/research_pdfs/research15_inequality.pdf
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3. **Tuesday, April 7: Fiscal federalism: who should do what? & Principles of taxation**

- a. Wildasin, David E., "Fiscal federalism," *New Palgrave Dictionary of Economics*, 2008; http://www.dictionaryofeconomics.com/article?id=pde2008_F000118
- b. National Conference of State Legislators, *Tax Policy Handbook for State Legislators*, Third Edition, February 2010, <http://www.ncsl.org/documents/fiscal/TaxPolicyHandbook3rdEdition.pdf>

4. **Thursday, April 9: Property taxation**

5. **Tuesday, April 14: Property taxation**

- a. Fisher, Ronald D., "What Policy Makers Should Know About Property Taxes," *Land Lines*, Lincoln Institute of Land Policy, January 2009; https://www.lincolnst.edu/pubs/1551_What-Policy-Makers-Should-Know-About-Property-Taxes
 - b. Fischel, William; Wallace Oates; and Joan Youngman, "Are Local Property Taxes Regressive, Progressive, or What?" July 2011; https://editorialexpress.com/cgi-bin/conference/download.cgi?db_name=IIPF67&paper_id=28
 - c. The Civic Federation, "The Cook County Property Tax System and Fundamental Principles of Taxation," November 22, 2010; <http://www.civicfed.org/civic-federation/publications/cook-county-property-tax-system-and-fundamental-principles-taxation>
 - d. Harris, Benjamin H., and Brian David Moore, "Residential Property Taxes in the United States," November 18, 2013; Brookings Institution and Urban Institute's Tax Policy Center; <http://www.taxpolicycenter.org/UploadedPDF/412959-residential-property-taxes.pdf>
 - e. [skim as needed] The Civic Federation, "The Cook County Property Tax Extension Process: A Primer on Levies, Tax Caps, and the Effect of Tax Increment Financing Districts," Updated version, September 7, 2011, <http://www.civicfed.org/civic-federation/publications/cook-county-property-tax-extension-process-primer-levies-tax-caps-and->
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6. **Thursday, April 16 & Tuesday, April 21: Property tax policies**

- a. Haveman, Mark, and Terri A. Sexton, "Property Tax Assessment Limits: Lessons from Thirty Years of Experience," Policy Focus Report, Lincoln Institute of Land Policy, 2008; available at <http://www.lincolninst.edu/pubs/PubDetail.aspx?pubid=1412>
- b. Wallin, Bruce, and Jeffrey Zabel, "Property tax limitations and local fiscal conditions: The impact of Proposition 2½ in Massachusetts," *Regional Science and Urban Economics* Volume 41, Issue 4, July 2011, Pages 382–393.
- c. Langley, Adam H., "How Do States Spell Relief? A National Study of Homestead Exemptions & Property Tax Credits," Lincoln Institute of Land Policy *Land Lines* April 2015, http://www.lincolninst.edu/pubs/2527_How-Do-States-Spell-Relief--A-National-Study-of-Homestead-Exemptions---Property-Tax-Credits
- d. Langley, Adam H., "Estimating Tax Savings from Homestead Exemptions and Property Tax Credits," Working paper WP14AL1, Lincoln Institute of Land Policy, April 2015; http://www.lincolninst.edu/pubs/2530_Estimating-Tax-Savings-from-Homestead-Exemptions-and-Property-Tax-Credits

7. **Thursday, April 23: Sales and excise taxation**

- a. Eleniewski, Joe; Doug Nagode; and James P. Trebby, "Trends in State Taxation: Consumption Tax versus Income Tax," Deloitte, 2015; <http://www2.deloitte.com/content/dam/Deloitte/us/Documents/Tax/us-tax-current-trends-in-state-taxation-consumption-tax-versus-income-tax-010915.pdf>
 - b. Henschman, Joseph, "The Marketplace Fairness Act: A Primer," Tax Foundation, July 2014, No. 69; <http://taxfoundation.org/article/marketplace-fairness-act-primer>
 - c. Leachman, Michael, and Michael Mazerov, "Four Steps to Moving State Sales Taxes Into the 21st Century," Center on Budget and Policy Priorities, July 9, 2013; <http://www.cbpp.org/files/7-9-13sfp.pdf>
 - d. Gleason, Patrick, "A Laffer Curve for Smokes," *Wall Street Journal* April 12, 2015.
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8. **Tuesday, April 28: State individual income taxation & state tax reform**

- a. Cohen, Roger; Andrew Lai; and Charles Steindel, "State Income Taxes and Interstate Migration," *Business Economics*, Vol. 49, No. 3 (2014);
<http://www.palgrave-journals.com/be/journal/v49/n3/full/be201425a.html>
- b. Mazerov, Michael, "State 'Income Migration' Claims Are Deeply Flawed," Center on Budget and Policy Priorities," October 20, 2014;
<http://www.cbpp.org/sites/default/files/atoms/files/10-20-14sfp.pdf>
- c. Walczak, Jared, and Scott Drenkard, "Maine Gears Up for a Serious Tax Reform Conversation," Tax Foundation, Fiscal Fact No. 446, January 2015;
<http://taxfoundation.org/article/maine-gears-serious-tax-reform-conversation>
- d. Leachman, Michael, and Chris Mai, "Lessons for Other States from Kansas' Massive Tax Cuts," Center on Budget and Policy Priorities, March 27, 2014;
<http://www.cbpp.org/sites/default/files/atoms/files/3-27-14sfp.pdf>
- e. Berman, Russell, "Kansas's Failed Experiment," *The Atlantic*, April 9, 2015;
<http://www.theatlantic.com/politics/archive/2015/04/kansass-failed-experiment/389874/>
- f. States' reliance on personal income vs. sales taxes over time:
<http://www.governing.com/topics/finance/gov-state-tax-collection-burden-shifts.html>

9. **Thursday, April 30: Corporate income taxation**

- a. Treu, Blake, "Basics of Income Apportionment for State Taxation of Corporations," Fuller Tax Blog, January 7, 2015;
<https://fulleredu.com/taxblog/basics-of-income-apportionment-for-state-taxation-of-corporations/>
 - b. Griffith, Cara, "Single Sales Factor Apportionment May Be Inevitable, But Is It Fair?" *Tax Analysts* September 17, 2014;
<http://www.taxanalysts.com/taxcom/taxblog.nsf/Permalink/UBEN-9P2R5L?OpenDocument>
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10. **Tuesday, May 5: User fees**

- a. Basso, Jack, and Tyler Duvall, "Funding Transportation Infrastructure with User Fees," The Hamilton Project, February 26, 2013; Brookings;
http://www.brookings.edu/~media/research/files/papers/2013/02/thp%20budget%20papers/thp_15waysfedbudget_prop9.pdf
- b. Auxier, Richard C., "Reforming State Gas Taxes: How states Are (and Are NOT) Addressing An Eroding Tax Base," Tax Policy Center, Urban Institute, November 2014;
<http://taxpolicycenter.org/UploadedPDF/413286-reforming-state-gas-tax.pdf>
- c. "Oregon's Road Usage Charge Program," Road User Fee Task Force, February 5, 2015;
http://www.oregon.gov/ODOT/HWY/RUFPP/docs/OregonRUCProgram_Feb5-2015.pdf
- d. [for fun!] Smith, Matthew Justin, "Public Transit and the Time-Based Fare Structure: Examining the Merits of Peak Pricing for Transit," University of Illinois Chicago, Urban Transportation Center, May 2009;
http://www.transportchicago.org/uploads/5/7/2/0/5720074/7-the_case_for_peak_pricing_on_public_transit.pdf.
- e. Linking user fees to income/ability to pay:
<http://www.governing.com/topics/urban/gov-seattle-bus-fare.html>
- f. Water pricing in the U.S. west:
<http://www.nytimes.com/2015/05/07/business/energy-environment/water-pricing-in-two-thirsty-cities.html>

11. **Thursday, May 7: Gaming revenues**

- a. Chalabi, Mona, "What Percentage of State Lottery Money Goes to the State?" Five-Thirty-Eight, November 10, 2014;
<http://fivethirtyeight.com/datalab/what-percentage-of-state-lottery-money-goes-to-the-state/>
- b. Commission on Government Forecasting and Accountability (COGFA), "Wagering in Illinois: 2014 Update," September 2014.
- c. "Commercial and Tribal Gaming Stats, 2014", Rubin Brown;
http://rubinbrown.com/RubinBrown_2014_Gaming_Stats.pdf

- d. Hansen, Alicia, "How Much Implicit Tax Revenue Did Lotteries Raise in FY2010?" Tax Foundation blog, December 28, 2010; <http://taxfoundation.org/blog/how-much-implicit-tax-revenue-did-lotteries-raise-fy2010>
- e. Stone, Lyman, and Joseph Henchman, "Lottery Tax Rates Vary Greatly By State," Tax Foundation *Fiscal Fact* No. 407, December 17, 2013; <http://taxfoundation.org/article/lottery-tax-rates-vary-greatly-state-0>
- f. Alabama and gaming revenues: <http://www.nytimes.com/2015/05/08/us/alabama-facing-deficit-reluctantly-mulls-gambling-and-taxes.html>

12. **Tuesday, May 12: Medicaid**

- a. Bitler, Marianne P., and Madeline Zavodny, "Medicaid: A Review of the Literature," National Bureau of Economic Research Working Paper 20169, May 2014; <http://www.nber.org/papers/w20169>.
- b. Brown, David W.; Amanda E. Kowalski; and Ithai Z. Lurie, "Medicaid as an Investment in Children: What is the Long-Term Impact on Tax Receipts?" National Bureau of Economic Research Working Paper 20835, January 2015; <http://www.nber.org/papers/w20835>.
- c. Mehra, Geeti, "Insuring the Uninsured," J-Pal Policy Briefcase, January 2014; Abdul Latif Jameel Poverty Action Lab; <http://www.povertyactionlab.org/publication/insuring-uninsured>.
- d. Paradise, Julia, "Medicaid Moving Forward," Kaiser Commission on Medicaid and the Uninsured Issue Brief, March 2015; <http://files.kff.org/attachment/issue-brief-medicaid-moving-forward>
- e. Taubman, Sarah; Heidi Allen, Bill Wright, Katherine Baicker, Amy Finkelstein, and the Oregon Health Study Group, "Medicaid Increases Emergency Department Use: Evidence from Oregon's Health Insurance Experiment", *Science*, 2014 Jan 17; 343(6168): 263-268; link available from <http://www.nber.org/oregon/publications.html>.
- f. NBER Digest summary of articles on Medicaid: <http://www.nber.org/digest/may15/w20929.html>

13. **Thursday, May 14: Intergovernmental Grants**

- a. Dilger, Robert Jay, and Eugene Boyd, "Block Grants: Perspectives and Controversies," Congressional Research Service Report R40486, July 15, 2014; <https://fas.org/sgp/crs/misc/R40486.pdf>.
- b. Gordon, Nora, "Intergovernmental Grants," Palgrave Dictionary of Economics, 2008; http://www.dictionaryofeconomics.com/article?id=pde2008_I000295.
- c. U.S. Congressional Budget Office, "Federal Grants to State and Local Governments," March 2013; <https://www.cbo.gov/publication/43967>.

14. **Tuesday, May 19: Midterm Exam**

15. **Thursday, May 21: Municipal Bonds**

- a. Dougherty, Beth, "Municipal Bonds: Understanding the Fundamentals," Nuveen Asset Management, September 2014; <http://www.nuveen.com/Home/Documents/Viewer.aspx?fileId=54108>
- b. Committee for a Responsible Federal Budget, "The Tax Break-down: Municipal Bonds," September 10, 2013; <http://crfb.org/blogs/tax-break-down-municipal-bonds>
- c. Doty, Robert, "Telling Myth from Reality in MuniLand," *Government Finance Review*, February 2013, pp. 18-23; <http://www.gfoa.org/telling-myth-reality-muniland>
- d. Sabol, Patrick, and Robert Puentes, "Building better infrastructure with better bonds," Brookings, April 22, 2015; <http://www.brookings.edu/research/papers/2015/04/22-building-better-infrast-structure-with-better-bonds-sabol-puentes>

For "fun":

- e. *Chicago Tribune* series on local municipal debt:
 - i. <http://media.apps.chicagotribune.com/tables/suburban-debt.html>
 - ii. <http://www.chicagotribune.com/news/local/ct-met-debt-rates-20121209,0,4226620,full.story>
 - iii. <http://www.chicagotribune.com/news/watchdog/ct-met-risky-borrowing-20130106,0,1377519.story>
 - f. <http://apps.chicagotribune.com/bond-debt/>
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16. Thursday, May 23: Education finance

- a. Discussed in class:
- i. Ushomirsky, Natasha, and David Williams, The Education Trust, “Funding Gaps 2015,” March 25, 2015. <http://edtrust.org/resource/funding-gaps-2015/>
 - ii. Cascio, Elizabeth U., Nora Gordon, and Sarah Reber, “Local Responses to Federal Grants: Evidence from the Introduction of Title I in the South,” *American Economic Journal: Economic Policy* 5.3 (2013): 126-159; http://works.bepress.com/cgi/viewcontent.cgi?article=1019&context=nora_gordon
- b. Other:
- i. Jackson, C. Kirabo; Rucker Johnson; and Claudia Persico, “The Effect of School Finance Reforms on the Distribution of Spending, Academic Achievement, and Adult Outcomes,” National Bureau of Economic Research working paper 20118, May 2014.
 - ii. Special issue of *Education Finance and Policy* on the topic of the property tax and the financing of K-12 education (2014); numerous papers
 - iii. Baker, Bruce, David Sciarra, and Danielle Farrie, "Is School Funding Fair? A National Report Card," 3rd edition, Education Law Center, January 2014; http://www.schoolfundingfairness.org/National_Report_Card_2014.pdf
 - iv. Baker, Bruce, “On School Finance Equity and Money Matters: A Primer”, March 1, 2015; <https://schoolfinance101.wordpress.com/2015/03/01/on-school-finance-equity-money-matters-a-primer/>
 - v. Bruce Baker’s blog on school finance: <https://schoolfinance101.wordpress.com/>
 - vi. Kenyon, Daphne A., “The Property Tax-School Funding Dilemma,” Lincoln Institute of Land Policy Policy Focus Report, December 2007; http://www.lincolninst.edu/pubs/1308_The-Property-Tax-School-Funding-Dilemma
 - vii. New America Foundation, Federal Education Budget Project, “School Finance,” April 21, 2014; <http://febp.newamerica.net/background-analysis/school-finance>

- viii. New America Foundation, Federal Education Budget Project, "School Finance Inequity," March 29, 2012;
<http://febp.newamerica.net/k12/rankings/schoffineq>

17. **Tuesday, May 28: Public-Private Partnerships**

- a. U.S. Congressional Budget Office, "Using Public-Private Partnerships to Carry Out Highway Projects," January 2012;
<http://www.cbo.gov/sites/default/files/01-09-PublicPrivatePartnerships.pdf>
- b. Engel, Eduardo, Ronald Fischer, and Alexander Galetovic, "Public-Private Partnerships to Revamp U.S. Infrastructure," The Hamilton Project, Discussion Paper 2011-02, February 2011;
http://www.hamiltonproject.org/files/downloads_and_links/Final_ENGELDiscussPap_Feb2011.pdf
- c. Goldsmith, Stephen, and Andrew Deye, "The Growing Evidence That P3's Are Delivering Value," *Governing*, March 18, 2015;
<http://www.governing.com/blogs/bfc/gov-evidence-public-private-partnerships-delivering-public-value.html>
- d. Sabol, Patrick, and Robert Puentes, "Private Capital, Public Good: Drivers of Successful Infrastructure Public-Private Partnerships," Brookings Institution, December 2014;
<http://www.brookings.edu/research/reports2/2014/12/17-infrastructure-public-private-partnerships-sabol-puentes>
- e. Chicago parking meters
- i. Various documents from William Blair & Company (posted to Chalk)
- ii. Office of the Inspector General, City of Chicago, "An Analysis of the Lease of the City's Parking Meters," June 2, 2009;
<http://chicagoinspectorgeneral.org/wp-content/uploads/2011/03/Parking-Meter-Report.pdf>
- iii. Roin, Julie, "Privatization and Sale of Tax Revenues." 95 *Minnesota Law Review* 1965 (2011);
http://www.minnesotalawreview.org/wp-content/uploads/2011/06/Roin_PDF.pdf

- f. Indiana Toll road
 - i. Gilroy, Leonard, and David Aloyts, “Leasing the Indiana Toll Road: Reviewing the First Six Years Under Private Operation,” Reason, 2013; <http://reason.org/news/show/leasing-the-indiana-toll-road>
 - ii. Puentes, Robert, and Patrick Sabol, “The Indiana Toll Road: How Did a Good Deal Go Bad?” Forbes, October 3, 2014; <http://www.forbes.com/sites/realspin/2014/10/03/the-indiana-toll-road-how-did-a-good-deal-go-bad/>

18. **Thursday, May 30: Public Sector Pensions**

Too many options! Here is a sample of what is out there:

- a. Basics about pension fund language and accounting
 - i. Harris, Richard H., “Understanding Actuarial Information,” *Government Finance Review*, April 2013; pp. 22-28; http://www.gfoa.org/sites/default/files/GFR_APR_13_22.pdf.
 - ii. Newton, Joseph, and Mark Randall, “Funding Policy and Actuarial Cost Methods,” Gabriel Roeder Smith & Company presentation, March 22, 2013; http://www.tmr.org/down/presentations/FundingPolicy_ActuarialCostMethods.pdf.
 - iii. Barkley, Rachel, “State and Local Pensions 101,” Morningstar, November 2012; <http://corporate.morningstar.com/us/documents/reports/pensions101.pdf>
- b. State and local government pension fund finances
 - i. J.P. Morgan Chase, "The ARC and the Covenants", 2014 Eye on the Market Special Publication ", June 5, 2014; http://www.statebudgetsolutions.org/docLib/20140702_TheARCandtheCovenants.pdf
 - ii. Johnson, Richard W.; Matthew M. Chingos; and Grover J. Whitehurst, "Are Public Pensions Keeping Up with the Times?" Brown Center on Education Policy at Brookings, June 2013; <http://www.brookings.edu/research/reports/2013/06/12-public-pensions-johnson-chingos-whitehurst>.
 - iii. McGuinn, Patrick, “Pension Politics: Public Employee Retirement System Reform in Four States”, Brookings, 2014; http://www.brookings.edu/~media/research/files/papers/2014/02/26%20public%20pension%20reform/pension%20politics_final_225.pdf.

- c. Reliable “players” in this policy space
- i. Joshua Rauh: <https://web.stanford.edu/~rauh/>; for example, “Revenue Demands of Public Employee Pension Promises” (with Robert Novy-Marx), 2014, American Economic Journal: Economic Policy 6(1), 193-229; <https://www.aeaweb.org/articles.php?doi=10.1257/pol.6.1.193>
 - ii. Center for Retirement Research at Boston College (<http://crr.bc.edu/>); for example, “How Did State/Local Plans Become Underfunded?” by Alicia H. Munnell, Jean-Pierre Aubry, and Mark Cafarelli; Brief No. 42, January 2015; http://crr.bc.edu/wp-content/uploads/2015/01/slp_42.pdf
 - iii. Pew Charitable Trusts; for example, “The Fiscal Health of State Pension Plans: Funding Gap Continues to Grow”; <http://www.pewtrusts.org/~media/Assets/2014/03/31/PewStatesWideningGapFactsheet2.pdf>
 - iv. Wilshire Consulting; for example, “2014 Report on State Retirement Systems: Funding Levels and Asset Allocation,” February 26, 2014; http://www.wilshire.com/media/17614/wilshire_2014_state_funding_report_20130226.pdf
-