

References



American Education Finance Association, National Education Association, and National Center for Education Statistics. Forthcoming. In John Dayton, C. Thomas Holmes, Catherine C. Sielke, and Anne L. Jefferson (eds.), *Public School Finance Programs in the United States and Canada*. Washington, DC: U.S. Department of Education, National Center for Education Statistics, NCES 2001–309.

Barro, Stephen M. 1994. *Cost-of-Education Differentials across the States*. Washington, DC: U.S. Department of Education, National Center for Education Statistics, Working Paper No. 94–05.

Barrow, Lisa and Cecilia Elena Rouse. 2000. *Using Market Valuation to Assess the Importance and Efficiency of Public School Spending*. NBER Working Paper #438, Princeton University.

Baumol, W. J. June 1967. “Macroeconomics of Unbalanced Growth: The Anatomy of Urban Crisis.” *American Economic Review* 57(3): 415–26.

Chambers, Jay G. 1998. *Geographic Variations in the Prices of Public School Inputs*. Washington, DC: U.S. Department of Education, National Center for Education Statistics, Working Paper No. 98–04.

Chambers, Jay G. 1997. *Measuring Inflation in Public School Costs*. Washington, DC: U.S. Department of Education, National Center for Education Statistics, Working Paper No. 98–04.



A Primer for Making Cost Adjustments in Education

Chambers, Jay G. 1981. "Cost and Price Level Adjustments to State Aid for Education: A Theoretical and Empirical Review." In K. Forbis Jordan and Nelda H. Cambron-McCabe (eds.), *Perspectives in State School Support Programs*. Cambridge, MA: Ballinger.

Chambers, Jay G. 1978. "Educational Cost Differentials and the Allocation of State Aid for Elementary/Secondary Education." *Journal of Human Resources* 13(4): 459–481.

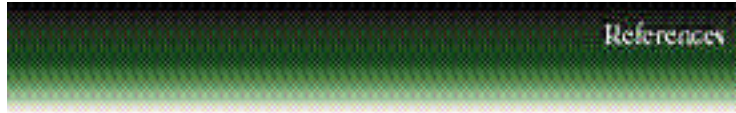
Chambers, Jay and William J. Fowler, Jr. 1995. *Public School Teacher Cost Differences across the United States*. Washington, DC: U.S. Department of Education, National Center for Education Statistics, NCES 95–758.

Dougherty, Chrys. 1996. "A Study of Administrative Expenditures in Texas Public Schools." In William J. Fowler, Jr. (ed.), *Developments in School Finance, 1995*. Washington, DC: U.S. Department of Education, National Center for Education Statistics, NCES 96–344.

Duncombe, William, John Ruggiero, and John Yinger. 1996. "Alternative Approaches to Measuring the Cost of Education." In Helen F. Ladd (ed.), *Holding Schools Accountable*. Washington, DC: The Brookings Institution.

Fairfax County School Board Auditor. 1999. *A Comparison of Pay Practices Among the Fairfax County Public Schools and Five Neighboring Systems*. Fairfax County Public Schools, Fairfax, VA.

Ferguson, Ronald F. and Helen F. Ladd 1996. "How and Why Money Matters: An Analysis of Alabama Schools." In Helen F. Ladd (ed.), *Holding Schools Accountable*. Washington, DC: The Brookings Institution: 265–298.



Fowler, William J. Jr. 1993. *Public School Education Financing for School Year 1989–90*. Washington, DC: U.S. Department of Education, National Center for Education Statistics, NCES 93–095.

Furno, Orland F. and Cuneo, Paul K. 1971. “Cost of Education Index. 1970–71 (12th).” *School Management* 15(1): 10–16.

GAO. 1996. *Options for Improving Measures of Effort and Equity in Title I*. Washington, DC: United States General Accounting Office. GAO/HEHS-96-142.

Gold, Steven D., David M. Smith, and Stephen B. Lawton. 1995. *Public School Finance Programs of the United States and Canada 1993–1994*. (two volumes) Albany, New York: American Education Finance Association in conjunction with the Center for the Study of the States, Nelson A. Rockefeller Institute of Government, State University of New York at Albany.

Greenlees, John S. and Charles C. Mason. December 1996. “Overview of the 1998 revision of the CPI.” *Monthly Labor Review*. Bureau of Labor Statistics.

Guthrie, James W. and Richard Rothstein. 1999. “Enabling Adequacy to Achieve Reality: Translating Adequacy into State School Finance Distribution Arrangements.” In Helen F. Ladd, Rosemary Chalk, and Janet S. Hansen, (eds.), *Equity and Adequacy in Education Finance: Issues and Perspectives*. Washington, DC: National Academy Press, National Research Council.

Halstead, D. Kent. 1993 and 1998. *Inflation Measures for Schools, Colleges, and Libraries*. Washington, DC: Research Associates of Washington.



A Primer for Making Cost Adjustments in Education

Hanushek, Eric A. 1999. "Adjusting for Differences in the Costs of Educational Inputs." In William J. Fowler, Jr. (ed.) *Selected Papers in School Finance: 1997–99*. Washington, DC: U.S. Department of Education, National Center for Education Statistics, NCES 1999–334.

Hanushek, Eric A. 1997. "The Productivity Collapse in Schools." In William J. Fowler, Jr. (ed.), *Developments in School Finance, 1996*. Washington, DC: U.S. Department of Education, National Center for Education Statistics, NCES 97–535.

Hanushek, E. A. 1996. "The Quest for Equalized Mediocrity: School Finance Reform without Consideration of School Performance." In L. O. Picus and J. L. Wattenbarger (eds.), *Where Does the Money Go? Resource Allocation in Elementary and Secondary Schools*. Thousand Oaks, CA: Corwin Press, Inc., 20–43.

Hanushek, Eric A. 1989. "The Impact of Differential Expenditures on School Performance." *Educational Researcher* 18(4): 45–51.

Hanushek, Eric A. 1979. "Conceptual and Empirical Issues in the Estimation of Education Production Functions." *Journal of Human Resources* 14(3): 351–388.

Hanushek, Eric A. and Steven G. Rivkin. Winter 1997. "Understanding the Twentieth-Century Growth in U.S. School Spending." *Journal of Human Resources* 32(I): 35–68.

Hickrod, G. Alan. 1997. "The Effect of Constitutional Litigation on Educational Finance: A Further Analysis." In William J. Fowler, Jr. (ed.), *Selected Papers in School Finance, 1995*. Washington, DC: U.S. Department of Education, National Center for Education Statistics, NCES 97–536.

King, Jennifer. 1994. "Meeting the Needs of At-Risk Students: A Cost Analysis of Three Models." *Educational Evaluation and Policy Studies* 16: 1–19.

Ladd, Helen F. 1998. "How School Districts Respond to Fiscal Constraint." In William J. Fowler, Jr. (ed.), *Selected Papers in School Finance 1996*. Washington, DC: U.S. Department of Education, National Center for Education Statistics, NCES 98–217.

Ladner, Joyce. 1998. "Financing Education in the District of Columbia from the Perspective of the Financial Authority." In William J. Fowler, Jr. (ed.), *Developments in School Finance 1997*. Washington, DC: U.S. Department of Education, National Center for Education Statistics, NCES 98–212.

Laine, Richard D., Rob Greenwald, and Larry Hedges. 1996. "Money Does Matter: A Research Synthesis of a New Universe of Education Production Function Studies." In L. O. Picus and J. L. Wattenbarger (eds.), *Where Does the Money Go: Resource Allocation in Elementary and Secondary Schools*. Thousand Oaks, CA: Corwin Press, Inc.

Lankford, Hamilton and James Wyckoff. 1996. "The Allocation of Resources to Special Education and Regular Instruction." In Helen F. Ladd (ed.), *Holding Schools Accountable*. Washington, DC: The Brookings Institution.

Lankford, Hamilton, Peter Ochshorn, and James Wyckoff. 1998. "The Dynamics of Teacher Salary Expense." In William J. Fowler, Jr. (ed.), *Selected Papers in School Finance, 1996*. Washington, DC: U.S. Department of Education, National Center for Education Statistics, NCES 98–217.

Lee, Valerie E. and Julia B. Smith. 1997. "High School Size: Which Works Best and for Whom?" *Educational Evaluation and Policy Analysis* 19(3): 205–228.





A Primer for Making Cost Adjustments in Education

Lewis, Scott J. 1996. "Administrative Expenditure Limits for Texas Public School Districts." In William J. Fowler, Jr. (ed.), *Developments in School Finance, 1995*. Washington, DC: U.S. Department of Education, National Center for Education Statistics, NCES 96-344.

Liegey, Paul R. and Nicole Shepler. September 1999. "Adjusting VCR Prices for Quality Change: A Study Using Hedonic Methods." *Monthly Labor Review*. Bureau of Labor Statistics.

McMahon, Walter W. 1996. "Intrastate Cost Adjustments." In William J. Fowler, Jr. (ed.), *Selected Papers in School Finance 1994*. Washington, DC: U.S. Department of Education, National Center for Education Statistics, NCES 96-068.

McMahon, Walter W. and S. Chang. 1991. "Geographical Cost-of-living Differences: Interstate and intra-state, update 1991." McArthur/Spencer Series, No. 20. Normal, Illinois: Center for the Study of Educational Finance, Illinois State University.

Miles, Karen Hawley and Darling-Hammond, Linda. 1998. "Rethinking the Allocation of Teaching Resources: Some Lessons from High Performing Schools." In William J. Fowler, Jr. (ed.), *Developments in School Finance, 1997*. Washington, DC: U.S. Department of Education, National Center for Education Statistics, NCES 98-212.

Monk, David H. 1996. "Conceptualizing the Costs of Large-Scale Pupil Performance Assessment." In Ruth Mitchell and Michael B. Kane (eds.), *Implementing Performance Assessment: Promises, Problems, and Challenges*. Lawrence Erlbaum Associates: Mahwah, NJ.

Monk, David H. 1992. "Education Productivity Research: An Update and Assessment of Its Role in Education Finance Reform." *Educational Evaluation and Policy Analysis* 14(4): 307–332.

Monk, David H. and Jennifer King Rice. 1999. "Modern Education Productivity Research: Emerging Implications for the Financing of Education." In William J. Fowler, Jr. (ed.), *Selected Papers in School Finance, 1997–99*. Washington, DC: U.S. Department of Education, National Center for Education Statistics, NCES 1999–334.

Monk, David H. and Billy D. Walker. 1991. "The Texas Cost of Education Index: A Broadened Approach." *Journal of Education Finance* 17(2): 172–192.

Nelson, F. Howard. 1991. "An Interstate Cost-of-living Index." *Educational Evaluation and Policy Analysis* 13(1): 103–111.

New York State Education Department. 1999. *Recognizing High Cost Factors in The Financing of Public Education: A Regents Report*.

Parrish, T. B. Spring 1996. "Special Education Finance: Past, Present, and Future." *Journal of Education Finance*: 451–476.

Parrish, Thomas B., Christine S. Matsumoto, and William J. Fowler, Jr. 1995. *Disparities in Public School District Spending, 1989–90*. Washington, DC: U.S. Department of Education, National Center for Education Statistics, NCES 95–300.





A Primer for Making Cost Adjustments in Education

Peternick, Lauri, Becky A. Smerdon, William J. Fowler, Jr., and David H. Monk. 1998. "Using Cost and Need Adjustments to Improve the Measurement of School Finance Equity." In William J. Fowler, Jr. (ed.), *Developments in School Finance, 1997*. Washington, DC: U.S. Department of Education, National Center for Education Statistics, NCES 98–212.

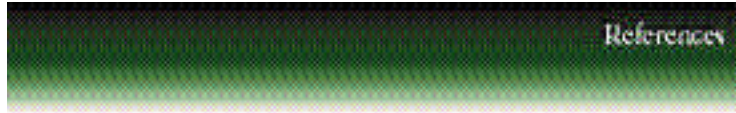
Reschovsky, A. and Imazeki, J. 1998. "The Development of School Finance Formulas to Guarantee the Provision of Adequate Education to Low-Income Students." In William J. Fowler, Jr. (ed.), *Developments in School Finance 1997*. Washington, DC: U.S. Department of Education, National Center for Education Statistics, NCES 98–212.

Riddle, Wayne and White, Liane. 1994. "Variations in Expenditures per Pupil within the States: Evidence from Census Data for 1989-90." *Journal of Education Finance* 19(3): 358–362.

Rothstein, Richard and Miles, Karen Hawley. 1995. *Where's the Money Gone? Changes in the Level and Composition of Education Spending*. Washington, DC: The Economic Policy Institute.

Rothstein, Richard and Mishel, Lawrence. 1997. "Alternative Options for Deflating Education Expenditures over Time." In William J. Fowler, Jr. (ed.), *Developments in School Finance, 1996*. Washington, DC: U.S. Department of Education, National Center for Education Statistics, NCES 97–535.

Schneider, Krista and Nelson, F. Howard. 1998. *Survey & Analysis of Salary Trends, 1997*. Washington, DC: The American Federation of Teachers.



U.S. Department of Education, National Center for Education Statistics. 2000. *Digest of Education Statistics, 1999*. Washington, DC: NCES 2000-031.

U.S. Department of Education, National Center for Education Statistics. 1999. *Digest of Education Statistics, 1998*. Washington, DC: NCES 1999-036.

U.S. Department of Education, National Center for Education Statistics. June 1998. *Statistics in Brief: Revenues and Expenditures for Public Elementary and Secondary Education: School Year 1995-96*. Washington, DC: NCES 98-205.

U.S. Department of Education, National Center for Education Statistics. 1996. *Digest of Education Statistics 1996*. Washington, DC: NCES 96-133.

U.S. Department of Education, National Center for Education Statistics. 1995. *The Condition of Education 1995*. Washington, DC: NCES 95-273.

U.S. Senate, Committee on Finance. 1996. *Final Report of the Advisory Commission to Study the CPI*. Print 104-72, 104 Cong., 2 sess., Washington, DC: Government Printing Office.

Williams, Janet L. December 1996. "The Redesign of the CPI Geographic Sample." *Monthly Labor Review*. Bureau of Labor Statistics.



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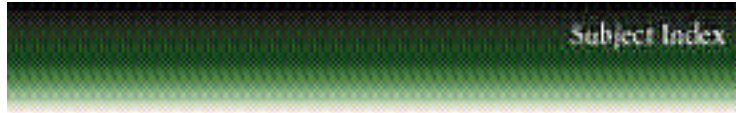
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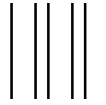
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