

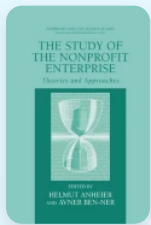
[Home](#) > [The Study of the Nonprofit Enterprise](#) > Chapter

Economic Theories of Nonprofit Organizations

An Evaluation

| Chapter

| pp 277–309 | [Cite this chapter](#)



[The Study of the Nonprofit Enterprise](#)

[Richard Steinberg](#)

 Part of the book series: [Nonprofit and Civil Society Studies](#) ((NCSS))



 1153 Accesses  33 [Citations](#)

Abstract

What makes for a good theory in economics? Tastes and opinions differ on this important issue, with some admiring the mathematical elegance and logical completeness of analysis, some admiring the metaphoric insight provided by deep description, and others admiring the development of new analytic tools rather than the application of those tools to nonprofit issues. In this Chapter, I choose to evaluate economic theories of the nonprofit sector by their ability to answer what I regard as the central questions in (a) describing the sector; (b) formulating

governmental policy towards the sector; and (c) managing nonprofit organizations. More specifically, I discuss theories’ ability to enlighten our understanding of the scope of inquiry, the determinants of the size and scope of the nonprofit sector, and the behavioral responses of donors, volunteers, paid staff, and nonprofit organizations to changes in their external environment. I then turn, more briefly and selectively, to theories’ ability to inform tax policy towards donations, taxation of nonprofit entities, competition among and between organizations in the various sectors, and fundraising regulation. Finally, I briefly discuss theories’ ability to improve the pricing, fundraising, and evaluation functions of nonprofit management.

Note: A shorter version of this chapter has been published as “Overall Analysis of Economic Theories” in *Voluntas*, 8, 179–204. The sections on governmental policy towards and management of nonprofit organizations are new to this version; the rest is updated from the previously published version.

 This is a preview of subscription content, [log in via an institution](#)  to check access.

Access this chapter

Log in via an institution →

 Chapter	EUR 29.95 Price includes VAT (Poland)	 eBook	EUR 160.49 Price includes VAT (Poland)
<ul style="list-style-type: none">● Available as PDF● Read on any device● Instant download● Own it forever		<ul style="list-style-type: none">● Available as EPUB and PDF● Read on any device● Instant download● Own it forever	
<div>Buy Chapter →</div>		<div>Buy eBook →</div>	

^ **Softcover Book** EUR 213.99
Price includes VAT (Poland)

- Compact, lightweight edition
- Dispatched in 3 to 5 business days
- Free shipping worldwide - [see info](#)

Buy Softcover Book →

^ **Hardcover Book** EUR 213.99
Price includes VAT (Poland)

- Durable hardcover edition
- Dispatched in 3 to 5 business days
- Free shipping worldwide - [see info](#)

Buy Hardcover Book →

Tax calculation will be finalised at checkout

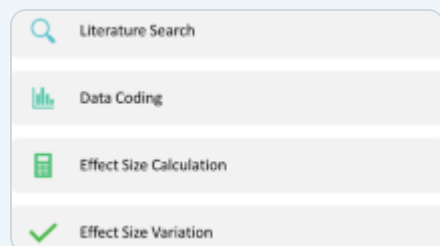
Purchases are for personal use only

[Institutional subscriptions →](#)

Preview

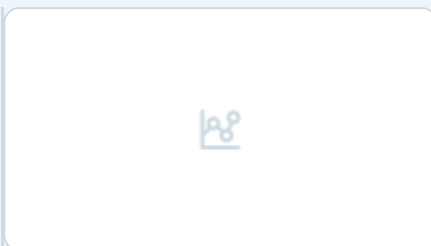
Unable to display preview. [Download preview PDF.](#)

Similar content being viewed by others



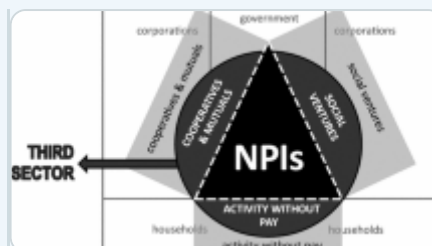
Meta-Analysis for Nonprofit Research: Synthesizing Quantitative Evidence for Knowledge Advancement

Article | 29 June 2022



Understanding nonprofit social enterprises: Lessons from Austrian economics

Article | 30 April 2019



Beyond Nonprofits: Re-conceptualizing the Third Sector

Article | 08 June 2016

References

Andreoni, J. (1988). Why Free Ride? Strategies and learning in public goods

experiments. *Journal of Public Economics*, 35, 291–304.

[Article](#) [Google Scholar](#)

Andreoni, J. (1989). Giving with impure altruism: Applications to charity and ricardian equivalence. *Journal of Political Economy*, 97, 1447–1458.

[Article](#) [Google Scholar](#)

Andreoni, J. (1993). An experimental test of the public goods crowding-out hypothesis. *American Economic Review*, 83, 1317–1327.

[Google Scholar](#)

Andreoni, J., & Bergstrom, T. (1996). Do government subsidies increase the private supply of public goods. *Public Choice*, 88, 295–308.

[Article](#) [Google Scholar](#)

Andreoni, J., Gale, W., & Scholz, J. K. (1996). *Charitable contributions of time and money*. Working Paper, University of Wisconsin Department of Economics, Madison WI.

[Google Scholar](#)

Arrow, Kenneth J. (1974). Gifts and exchanges. *Philosophy and Public Affairs*, 1, 343–362.

[Google Scholar](#)

Austen-Smith, D., & Jenkins, S. (1985). A multiperiod model of nonprofit enterprise. *Scottish Journal of Political Economy*, 32, 119–134.

[Article](#) [Google Scholar](#)

Auten, G. E., Cilke, J. M., & Randolph, W.C. (1992). The effects of tax reform on charitable contributions. *National Tax Journal*, XLV, 267–290.

[Google Scholar](#)

Auten, G. E., & Joulfaian, D. (1996). Charitable contributions and intergenerational transfers. *Journal of Public Economics*, 59, 55–68.

[Article](#) [Google Scholar](#)

Auten, G. E., & Rudney, G. (1990). The variability of individual charitable giving in the U.S. *Voluntas*, 1, 80–97.

[Article](#) [Google Scholar](#)

Auten, G. E., Sieg, H., & Clotfelter, C. (2002). *Charitable giving, income, and taxes: An analysis of panel data*. *American Economic Review*, 92, 371–382.

[Article](#) [Google Scholar](#)

Bagnoli, M., & McKee, M. (1991). Voluntary contribution games: Efficient private provision of public goods. *Economic Inquiry*, 29, 351–366.

[Article](#) [Google Scholar](#)

Bakija, J. (1999). *Consistent estimation of permanent and transitory tax-price and income elasticities: The case of charitable giving*. Working Paper, Department of Economics, University of Michigan.

[Google Scholar](#)

Barrett, K. S. (1991). Panel-data estimates of charitable giving: A synthesis of techniques. *National Tax Journal*, XLIV, 365–381.

[Google Scholar](#)

Barrett, K. S., & McGuirk, A. (1992). *Charitable giving and federal income tax policy: Additional evidence based on panel-data elasticity estimates: The case of the student's T distribution*. Paper presented at 1992 annual conference of the Association for Research on Nonprofit Organizations and Voluntary Action, New Haven, CT.

[Google Scholar](#)

Barrett, K. S., McGuirk, A., & Steinberg, R. (1997). Further evidence on the dynamic impact of taxes on charitable giving. *National Tax Journal*, *L*, 321-334.

[Google Scholar](#)

Becker, E., & Lindsay, C. M. (1994). Does the government free ride? *Journal of Law and Economics*, *37*(1), 277-296.

[Article](#) [Google Scholar](#)

Ben-Ner, A. (1986). Nonprofit organizations: Why do they exist in market economies? In Susan Rose-Ackerman (Ed.), *The economics of nonprofit institutions: Studies in structure and policy*. New York: Oxford University Press.

[Google Scholar](#)

Ben-Ner, A. (1987). *Birth, change, and bureaucratization in nonprofit organizations: An economic analysis*. Working Paper, University of Minnesota, Minneapolis, MN.

[Google Scholar](#)

Ben-Ner, A., & Van Hoomissen, T. (1991). Nonprofits in the mixed economy: A demand and supply analysis. *Annals of Public and Cooperative Economics*, *62*, 519-550.

[Article](#) [Google Scholar](#)

Ben-Ner, A., & Van Hoomissen, T. (1994). The governance of nonprofit organizations: Law and public policy. *Nonprofit Management and Leadership*, 4, 393-414.

[Article](#) [Google Scholar](#)

Billis, D. (1993). *Organising public and voluntary agencies*. Routledge, London.

[Google Scholar](#)

Bilodeau, M. (1992). Voluntary contributions to united charities. *Journal of Public Economics*, 48, 119-133.

[Article](#) [Google Scholar](#)

Bilodeau, M. (2000). *Profitable nonprofit firms*. Working Paper, IUPUI Department of Economics, Indianapolis, IN.

[Google Scholar](#)

Bilodeau, M., & Slivinski, A. (1996). Volunteering nonprofit entrepreneurial services. *Journal of Economic Behavior and Organization*, 31, 117-127.

[Article](#) [Google Scholar](#)

Bilodeau, M., & Slivinski, A. (1997). Rival charities. *Journal of Public Economics*, 66, 449-467.

[Article](#) [Google Scholar](#)

Bilodeau, M., & Slivinski, A. (1998). Rational nonprofit entrepreneurship. *Journal of Economics and Management Strategy*, 7, 551-571.

[Article](#) [Google Scholar](#)

Bittker, B. I., & Rahdert, G. K. (1976). The exemption of nonprofit organizations from federal income taxation. *Yale Law Journal*, 85, 299–358.

[Article](#) [Google Scholar](#)

Borjas, G. J., Frech H. E., III, & Ginsburg, P. B. (1983). Property rights and wages: The case of nursing homes. *Journal of Human Resources*, 17, 231–246.

[Article](#) [Google Scholar](#)

Boskin, M. J. (1976). Estate taxation and charitable bequests. *Journal of Public Economics*, 5, 27–56.

[Article](#) [Google Scholar](#)

Boulding, K. (1972). *Towards a pure theory of foundations*. Nonprofit Report, New York.

[Google Scholar](#)

Boyle, S. E., & Jacobs, P. (1978). The economics of charitable fund raising. *Philanthropy Monthly*, May, 21–27.

[Google Scholar](#)

Bradley, R., Holden, S., & McClelland, R. (1999). *A robust estimation of the effects of taxation on charitable contributions*. Working Paper, Bureau of Labor Statistics.

[Google Scholar](#)

Bristol, R. B. (1985). Tax cuts and charitable giving. *Tax Notes*, July 15, 323–326.

[Google Scholar](#)

Brooks, A. C. (1999). Do public subsidies leverage private support for the Arts? Empirical evidence on symphony orchestras. *Nonprofit and Voluntary Sector Quarterly*, 28, 32-45.

[Article](#) [Google Scholar](#)

Brooks, A. C. (2000). Is there a dark side to government support for nonprofits? *Public Administration Review*, 60, 211-218.

[Article](#) [Google Scholar](#)

Brown, E. (1999). Assessing the value of volunteer activity. *Nonprofit and Voluntary Sector Quarterly*, 28, 3-17.

[Article](#) [Google Scholar](#)

Brown, E., & Lankford, R. H. (1992). Gifts of money and gifts of time: Estimating the effects of tax prices and available time. *Journal of Public Economics*, 47, 321-341.

[Article](#) [Google Scholar](#)

Brudney, J. L., & Duncombe, W. D. (1992). An economic evaluation of paid, volunteer, and mixed staffing options for public services. *Public Administration Review*, 52, 474-481.

[Article](#) [Google Scholar](#)

Carlton, D. W., Bamberger, G. E., & Epstein, R. J. (1995). Antitrust and higher education: Was there a conspiracy to restrict financial aid? *The Rand Journal of Economics*, 26, 131-147.

[Article](#) [Google Scholar](#)

Chang, C. F., & Tuckman, H. R (1990a). Why do nonprofit managers accumulate

surpluses and how much do they accumulate? *Nonprofit Management and Leadership*, 1, 117-135.

[Article](#) [Google Scholar](#)

Chang, C. F., & Tuckman, H. P. (1990b). Do higher tax rates increase the market share of nonprofit hospitals? *National Tax Journal*, 175-187.

[Google Scholar](#)

Chang, C. F., & Tuckman, H. P. (1991a). A methodology for measuring the financial vulnerability of charitable nonprofit organizations. *Nonprofit and Voluntary Sector Quarterly*, 20, 445-460.

[Article](#) [Google Scholar](#)

Chang, C. F., & Tuckman, H. P. (1991b). Financial vulnerability and attrition as measures of nonprofit performance. *Annals of Public and Cooperative Economics*, 62(4), 655-672.

[Article](#) [Google Scholar](#)

Chiliemi, O., & Gui, B. (1990). Product quality in trust type nonprofits: An expository evaluation of three economic models. In *Towards the 21st century: Challenges for the voluntary sector* (Proceedings of the 1990 AVAS Conference). London.

[Google Scholar](#)

Chillemi, O., & Gui, B. (1991). Uninformed customers and nonprofit organization: Modelling 'Contract Failure' theory. *Economics Letters*, 35, 5-8.

[Article](#) [Google Scholar](#)

Chua, V. C. H., & Wong, C. M. (1999). Tax incentives, individual characteristics,

and charitable giving in Singapore. *International Journal of Social Economics*, 26(2), 1492-1504.

[Article](#) [Google Scholar](#)

Clotfelter, C. T. (1985). *Federal tax policy and charitable giving*. Chicago: University of Chicago.

[Google Scholar](#)

Clotfelter, C. T. (1988-89). Tax-induced distortions in the voluntary sector. *Case Western Reserve Law Review*, 39, 663-704.

[Google Scholar](#)

Clotfelter, C. T., & Schmalbeck, R. L. (1996). *The impact of fundamental tax reform on nonprofit organizations*. Paper presented at Brookings Institution Conference on The Economic Effects of Fundamental Tax Reform, Feb. 15-16.

[Google Scholar](#)

Coase, R. H. (1937). The nature of the firm. *Economica*, 386-405.

[Google Scholar](#)

Collard, D. (1978). *Altruism and economy. A study in non-selfish economics*. Oxford, UK: Oxford University Press.

[Google Scholar](#)

Colliton, J. W. (1980). The meaning of 'Contribution or Gift' for charitable contribution deduction purposes. *Ohio State Law Journal*, 41, 973-1005.

[Google Scholar](#)

Colombo, J. D., & Hall, M. A. (1995). *The Charitable Tax Exemption*, Westview Press, Boulder, CO.

[Google Scholar](#)

Conrad, D. (1986). Returns on equity for not-for-profit hospitals: A commentary and elaboration. *Health Services Research*, 21, 17-20.

[Google Scholar](#)

Cordes, J., & Weisbrod, B. (1998). Differential taxation of nonprofits and the commercialization of nonprofit revenues. In Burton Weisbrod (Ed.), *To profit or not to profit: The commercial transformation of the nonprofit sector*. NY: Cambridge University Press.

[Google Scholar](#)

Cornes, R., & Sandler, T. (1984). Easy riders, joint production, and public goods. *Economic Journal*, 94, 580-598.

[Article](#) [Google Scholar](#)

Davie, B. F (1985). Tax rate changes and charitable contributions. *Tax Notes*, March 11, 1037-1040.

[Google Scholar](#)

Davis, D. D., & Holt, C. A. (1992). *Experimental economics*. Princeton, NJ: Princeton University Press.

[Google Scholar](#)

Day, K. M., & Devlin, R. A. (1996). Volunteerism and crowding out: Canadian econometric evidence. *Canadian Journal of Economics*, 29(1), 37-53.

[Article](#) [Google Scholar](#)

Diamond, A. M., Jr. (1999). Does federal funding “crowd in” private funding of science? *Contemporary Economic Policy*, 17, 423–431.

[Article](#) [Google Scholar](#)

Doyle, M. P (1992). *New evidence on private charity: Accounting for the effect of religious affiliation*. Working Paper, Department of Economics, MIT, Cambridge, MA.

[Google Scholar](#)

Duncan, B. (1999). Modeling charitable contributions of time and money. *Journal of Public Economics*, 72(2), 213–242.

[Article](#) [Google Scholar](#)

Dye, R. (1980). Contributions of volunteer time: Some evidence on income tax effects. *National Tax Journal*, 33, 89–93.

[Google Scholar](#)

Easley, D., & O’Hara, M. (1983). The economic role of the nonprofit firm. *Bell Journal of Economics*, 14, 531–538.

[Article](#) [Google Scholar](#)

Eckel, C. C., & Steinberg, R. (1993). Competition, performance, and public policy towards nonprofits. In David Hammack & Dennis Young (Eds.), *Nonprofit organizations in a market economy*. San Francisco: Jossey-Bass.

[Google Scholar](#)

Eckel, C. C., & Steinberg, R. (1994). *Tax policy and the objectives of nonprofit organizations in a mixed-sector duopoly*. Working Paper, Indiana University

Feigenbaum, S. (1980). The case of income redistribution: A theory of government and private provision of collective goods. *Public Finance Quarterly*, 8, 3-22.

[Article](#) [Google Scholar](#)

Feldstein, M. (1971). Hospital cost inflation: A study in nonprofit price dynamics. *American Economic Review*, 61, 853-872.

[Google Scholar](#)

Feldstein, M., & Lindsey, L. (1983). Simulating nonlinear tax rules and nonstandard behavior: An application to the tax treatment of charitable contributions. In Martin Feldstein (Ed.), *Behavioral simulation methods in tax policy analysis*. Cambridge, MA: National Bureau of Economic Research.

[Google Scholar](#)

Ferris, J., & Graddy, E. (1986). Contracting out: For what? With whom? *Public Administration Review*, 332-344.

[Google Scholar](#)

Ferris, J., & Graddy, E. (1991). Production costs, transaction costs, and local government contractor choice. *Economic Inquiry*, 29, 541-554.

[Article](#) [Google Scholar](#)

Folland, S., (1990). *Nonprofit entry: A theory and an empirical test for the case of hospitals*. Working Paper, School of Business Administration, Oakland University, Oakland MN.

Frischmann, P. J., & Lin, S. (1990). *Fixed and random effects models: Two methods to improve parameter estimates using panel data*. Working Paper, Arizona State University, Tempe, AZ.

[Google Scholar](#)

Gergen, M. (1988). The case for a charitable contributions deduction. *Virginia Law Review*, 74, 1393–1450.

[Article](#) [Google Scholar](#)

Glaeser, E. L., & Shleifer, A. (2001). Not-for-profit entrepreneurs. *Journal of Public Economics*, 81(1), 99–115.

[Article](#) [Google Scholar](#)

Goddeeris, J. H. (1988). Compensating differentials and self-selection: An application to lawyers. *Journal of Political Economy*, 96, 411–428.

[Article](#) [Google Scholar](#)

Goddeeris, J. H., & Weisbrod, B. A. (1999). Why not for-profit? Conversions and public policy. In Elizabeth T. Boris & C. Eugene Steurle (Eds.), *Nonprofits and government: Collaboration and conflict*. Washington, DC: The Urban Institute Press.

[Google Scholar](#)

Goodspeed, T., & Kenyon, D. (1994). The nonprofit sector's capital constraint: Does it provide a rationale for the tax-exemption granted to nonprofit firms? *Public Finance Quarterly*, 22.

[Google Scholar](#)

Gray, B. H. (1997). Conversion of HMOs and hospitals: What's at stake? *Health Affairs*, 16, 29-47.

[Article](#) [Google Scholar](#)

Gray, B. H. (1999). The changing face of health care. In Charles T. Clotfelter & Thomas Ehrlich (Eds.), *Philanthropy and the nonprofit sector in a changing America*. Indianapolis: Indiana University Press.

[Google Scholar](#)

Grønbjerg, K. (1990). *Managing nonprofit funding relationships: Case studies of six human service organizations*. Working Paper #156, Program on Nonprofit Organizations, Yale University, New Haven, CT.

[Google Scholar](#)

Grønbjerg, K. (1993). *Understanding nonprofit funding*. San Francisco, CA: Jossey-Bass.

[Google Scholar](#)

Gui, B. (1990). *Nonprofit organizations and product quality under asymmetric information*. Working Paper, Department of Economics and Statistics, Trieste University, Trieste, Italy.

[Google Scholar](#)

Gulley, D. O., & Santerre, R. E. (1993). The effect of tax exemption on the market share of nonprofit hospitals. *National Tax Journal*, XLVI, 477-486.

[Google Scholar](#)

Guttman, J. M. (1986). Matching behavior and collective action: Some experimental evidence. *Journal of Economic Behavior and Organization*, 7, 171-

[Article](#) [Google Scholar](#)

Hanchate, A. (1996). Nonprofit pricing of services under cost uncertainty: Alternative pricing strategies for the intermuseum laboratory. *Journal of Cultural Economics*, 20.

[Google Scholar](#)

Handy, F. (1997). Co-existence of nonprofits, for-profits and public sector institutions. *Annals of Public and Cooperative Economics*, 68, 201–224.

[Article](#) [Google Scholar](#)

Hansmann, H. (1980). The role of nonprofit enterprise. *Yale Law Journal*, 89, 835–901.

[Article](#) [Google Scholar](#)

Hansmann, H. (1981a). Nonprofit enterprise in the performing arts. *Bell Journal of Economics*, 12, 341–361.

[Article](#) [Google Scholar](#)

Hansmann, H. (1981b). The rationale for exempting nonprofit organizations from the corporate income tax. *Yale Law Journal*, 91, 54–100.

[Article](#) [Google Scholar](#)

Hansmann, H. (1981c). Reforming nonprofit corporation law. *University of Pennsylvania Law Review*, 129, 497–623.

[Article](#) [Google Scholar](#)

Hansmann, H. (1987a). The effect of tax exemption and other factors on the market share of nonprofit versus for-profit firms. *National Tax Journal*, XL, 71–82.

[Google Scholar](#)

Hansmann, H. (1987b). Economic theories of nonprofit organization. In Walter W. Powell (Ed.), *The nonprofit sector: A research handbook*. New Haven, CT: Yale University Press.

[Google Scholar](#)

Hansmann, H. (1989). Unfair competition and the unrelated business income tax. *Virginia Law Review*, 75, 605–635.

[Article](#) [Google Scholar](#)

Hansmann, H. (1990). Why do universities have endowments? *Journal of Legal Studies*, XIX, 3–42.

[Article](#) [Google Scholar](#)

Hey, J. D. (1991). *Experiments in economics*. Cambridge, MA: Basil Blackwell.

[Google Scholar](#)

Hirth, R. A. (1995). Consumer information and competition between nonprofit and for-profit nursing homes. *Journal of Health Economics*, 18, 219–240.

[Article](#) [Google Scholar](#)

Holtmann, A. G. (1983). A theory of non-profit firms. *Economica*, 50, 439–449.

[Article](#) [Google Scholar](#)

Holtmann, A. G., & Ullmann, S. G. (1991). Transaction costs, uncertainty, and not-

for-profit organizations: The case of nursing homes. *Annals of Public and Cooperative Economics*, 62, 4.

[Article](#) [Google Scholar](#)

Hughes, P. N., & Luksetich, W. A. (1999). The relationship among funding sources for art and history museums. *Nonprofit Management and Leadership*, 10, 21–38.

[Article](#) [Google Scholar](#)

Isaac, M. R., & Walker, J. M. (1988). Group size effects in public good provision: The voluntary contributions mechanism. *Quarterly Journal of Economics*, 53, 179–200.

[Article](#) [Google Scholar](#)

Jacobs, P., & Wilder, R. P. (1984). Pricing behavior of non-profit agencies: The case of blood products. *Journal of Health Economics*, 3, 49–61.

[Article](#) [Google Scholar](#)

James, E. (1983). How nonprofits grow: A model. *Journal of Policy Analysis and Management*, 2, 350–366.

[Article](#) [Google Scholar](#)

James, E. (1986). Comment. In Susan Rose-Ackerman (Ed.), *The economics of nonprofit institutions: Studies in structure and policy*. New York: Oxford University Press.

[Google Scholar](#)

James, E. (1989). Introduction. In E. James (Ed.), *The nonprofit sector in international perspective: Studies in comparative culture and policy*. New York: Oxford University Press.

[Google Scholar](#)

Joulfaian, D. (2000a). Estate taxes and charitable bequests by the wealthy. *National Tax Journal*, 53(3), 743–763.

[Google Scholar](#)

Joulfaian, D. (2000b). *Charitable giving in life and at death*. In Rethinking Estate and Gift Taxation, Brookings Institution, 2001, pp. 350–374.

[Google Scholar](#)

Kaufman, D. A. (1991). Self-serving philanthropy and pareto optimality. *Annals of Public and Cooperative Economics*, 62(4), 573–590.

[Article](#) [Google Scholar](#)

Khanna, J., Posnett, J., & Sandler, T. (1995). Charity donations in the UK: New evidence based on panel data. *Journal of Public Economics*, 56, 257–272.

[Article](#) [Google Scholar](#)

Khanna, J., & Sandler, T. (2000). Partners in giving: The crowding-in effects of UK government grants. *European Economic Review*, 44, 1543–1556.

[Article](#) [Google Scholar](#)

Kiesling, L. L. (1995). *Moral sentiments and reputation capital in charitable giving: Institutional change and the role of information in Victorian Lancashire*. Working Paper, Department of Economics, College of William and Mary, Williamsburg, VA.

[Google Scholar](#)

Kingma, B. R. (1993a). *Performance and compensation of nonprofit executive*

directors. Paper presented at the annual meeting of the Association for Research on Nonprofit Organizations and Voluntary Action, Toronto.

[Google Scholar](#)

Kingma, B. R. (1993b). Portfolio theory and nonprofit financial stability. *Nonprofit and Voluntary Sector Quarterly*, 22, 105–120.

[Article](#) [Google Scholar](#)

Kingma, B. R. (1995). Do profits “Crowd Out” Donations, or Vice Versa? The impact of revenues from sales on donations to local chapters of the American Red Cross. *Nonprofit Management and Leadership*, 6, 21–38.

[Article](#) [Google Scholar](#)

Kingma, B. R. (1996). Balancing the mix of revenues from profits, donations, and government. In Dwight Burlingame & Warren Ilchman (Eds.), *Alternative revenue sources: Prospects, requirements, and concerns for nonprofits* (volume title), *New directions for philanthropic fundraising* (vol. 12, pp. 143–156).

[Google Scholar](#)

Kingma, B. R., & McClelland, R. (1995). Public radio stations are really, really not public goods: Charitable contributions and impure altruism. *Annals of Public and Cooperative Economics*, 66, 65–76.

[Article](#) [Google Scholar](#)

Krashinsky, M. (1986). Transactions costs and a theory of the nonprofit organization. In Susan Rose-Ackerman (Ed.), *The economics of nonprofit institutions*. New York: Oxford University Press.

[Google Scholar](#)

Lankford, R. H., & Wyckoff, J. H. (1991). Modeling charitable giving using a Box-Cox standard Tobit Model. *The Review of Economics and Statistics*, 73, 460–470.

[Article](#) [Google Scholar](#)

Ledyard, J. O. (1995). Public goods: A survey of experimental research. In Alvin E. Roth & John H. Kagl (Eds.), *The handbook of experimental economics*. Princeton, NJ: Princeton University Press.

[Google Scholar](#)

Leete, L. (2001). Wither the the nonprofit wage differential: Estimates from the 1990 census. *Journal of Labor Economics*, 19(1), 136–170.

[Article](#) [Google Scholar](#)

Lindahl, W. E. (1991). Differentiating planned and major gift prospects. *American Prospect Research Association, Fall*.

[Google Scholar](#)

Lindahl, W. E. (1992). *Strategic planning for fund raising: How to bring in more money using strategic resource allocation*. San Francisco: Jossey-Bass.

[Google Scholar](#)

Lindahl, W. E. (1994). Multiyear evaluation of fundraising performance. In James M. Greenfield (Ed.), *Financial practices for effective fundraising* (volume title), *New directions in Philanthropic Fundraising*, 3, 77–94.

[Google Scholar](#)

Lindahl, W. E. (1995). The major gift donor relationship: An analysis of donors and contributions. *Nonprofit Management and Leadership*, 5, 411–432.

[Article](#) [Google Scholar](#)

Lindahl, W. E., & Winship, C. (1992). Predictive models for annual fundraising and major gift fundraising. *Nonprofit Management and Leadership*, 3, 43-64.

[Article](#) [Google Scholar](#)

Lindahl, W. E., & Winship, C. (1994). A logit model with interactions for predicting major gift donors. *Research in Higher Education*, 35, 729-743.

[Article](#) [Google Scholar](#)

List, J., & Lucking-Reiley, D. (2002). The effects of seed money and refunds on charitable giving: Experimental evidence from a University Capital Campaign. *Journal of Political Economy*, 110(1), 215-233.

[Article](#) [Google Scholar](#)

Long, S. H. (1977). Income tax effects on donor choice of money and time donations. *National Tax Journal*, 30, 207-211.

[Google Scholar](#)

Margolis, Howard. (1982). *Selfishness, altruism, and rationality*. New York: Cambridge University Press.

[Google Scholar](#)

Mark, M. M., & Shotland, R. L., (1983). Increasing charitable contributions: An experimental evaluation of the American Cancer Society's recommended solicitation procedures. *Journal of Voluntary Action Research*, 12(2), 8-22.

[Google Scholar](#)

Marks, M. (1993). *The effect of alternative rebate rules and preference strength*

in the provision point mechanism of voluntary contributions: An experimental investigation. Unpublished Ph.D. dissertation in Economics, Texas A&M University, College Station, TX.

[Google Scholar](#)

Marwell, G., & Ames, R. E. (1980). Experiments on the provision of public goods II: Provision points, stakes, experience, and the free-rider problem. *American Journal of Sociology*, 85, 927–937.

[Article](#) [Google Scholar](#)

Marwell, G., & Ames, R. E. (1981). Economists free ride: Does anyone else? *Journal of Public Economics*, 15, 295–310.

[Article](#) [Google Scholar](#)

Mauser, E. (1993). *Is organizational form important to consumers and managers: An application to the day-care industry*. Unpublished Ph.D. dissertation in Economics, University of Wisconsin at Madison, Madison, WI.

[Google Scholar](#)

McClelland, R., & Kokoski, M. (1994). Econometric issues in the analysis of charitable giving. *Public Finance Quarterly*, 22, 498–517.

[Article](#) [Google Scholar](#)

McGregor-Lowndes, M. (1992). *Comparative legal structures of nonprofit organisations*. Paper presented at Third International Conference on Philanthropy, Indianapolis, IN.

[Google Scholar](#)

Menchik, P. & Weisbrod, B. (1987). Volunteer labor supply. *Journal of Public*

Economics, 32, 159-183.

[Article](#) [Google Scholar](#)

Mohr, J. W., & Guerra-Pearson, F (1996). The effect of state intervention in the nonprofit sector: The case of the new deal. *Nonprofit and Voluntary Sector Quarterly*, 25(4), 525-539.

[Article](#) [Google Scholar](#)

Morgan, J., & Sefton, M. (2000). Funding public goods with lotteries: Experimental evidence. *Review of Economic Studies*, 67, 785-810.

[Article](#) [Google Scholar](#)

Mueller, M. (1975). Economic determinants of volunteer work by women. *Signs: Journal of Women and Culture in Society*, 1, 325-388.

[Article](#) [Google Scholar](#)

Newhouse, J. (1970). Toward a theory of nonprofit institutions: An economic model of a hospital. *American Economic Review*, 60, 64-73.

[Google Scholar](#)

Okten, C., & Weisbrod, B. A. (2000). Determinants of donations in private nonprofit markets. *Journal of Public Economics*, 75, 255-272.

[Article](#) [Google Scholar](#)

Okunade, A. (1994). *Determinants of charitable giving of business school alumni*. Working Paper, Department of Economics, Memphis University.

[Google Scholar](#)

Okunade, A., Wunnava, P. V., & Walsh, R., Jr. (1994). Charitable giving of alumni: Microdata evidence from a large public university. *The American Journal of Economics and Sociology*, 53, 73–84.

[Article](#) [Google Scholar](#)

O’Neil, C. J., Steinberg, R., & Thompson, R. G. (1996). Reassessing the tax-favored status of the charitable deduction for gifts of appreciated assets. *National Tax Journal*, XLIX(2), 215–234.

[Google Scholar](#)

Oster, S. M. (1992). Nonprofit organizations as franchise operations. *Nonprofit Management and Leadership*, 2(3), 223–238.

[Article](#) [Google Scholar](#)

Pauly, M., & Redisch, M. (1973). The not-for-profit hospital as a physicians’ cooperative. *American Economic Review*, 63, 87–99.

[Google Scholar](#)

Pauly, M. (1987). Paying a return on equity to not-for-profit hospitals—some further thoughts. *Health Services Research*, 22(2), 271–275.

[Google Scholar](#)

Payne, A. A. (1998). Does the government crowd-out private donations? New evidence from a sample of non-profit firms. *Journal of Public Economics*, 69, 323–345.

[Article](#) [Google Scholar](#)

Payne, A. A. (2001). Measuring the effect of federal research funding on private donations at research universities: Is federal research funding more than a

substitute for private donations? *International Tax and Public Finance*, 8, 731–751.

[Article](#) [Google Scholar](#)

Posnett, J., & Sandler, T. (1986). Joint supply and the finance of charitable activity. *Public Finance Quarterly*, 14, 209–222.

[Article](#) [Google Scholar](#)

Posnett, J., & Sandler, T. (1989). Demand for charity donations in private non-profit markets: The case of the U.K. *Journal of Public Economics*, 40, 187–200.

[Article](#) [Google Scholar](#)

Preston, A. E. (1988a). The nonprofit firm: A potential solution to inherent market failures. *Economic Inquiry*, 26, 493–506.

[Article](#) [Google Scholar](#)

Preston, A. E. (1988b). The effects of property rights on labor costs of nonprofit firms: An application to the day care industry. *Journal of Industrial Economics*, 36, 337–349.

[Article](#) [Google Scholar](#)

Preston, A. E. (1989). The nonprofit worker in a for-profit world. *Journal of Labor Economics*, 7, 438–463.

[Article](#) [Google Scholar](#)

Preston, A. E. (1992). *Entrepreneurial self-selection into the nonprofit sector: Effects on motivations and efficiency*. Working Paper, W. Averell Harriman School for Management and Policy, SUN Y at Stony Brook, Stony Brook NY.

[Google Scholar](#)

Price Waterhouse LLP Caplin and Drysdale, Chartered (no authors identified). (1997). *Impact of tax restructuring on tax-exempt organizations*. Report commissioned by the Council on Foundations and Independent Sector.

[Google Scholar](#)

Randolph, W. C. (1995). Dynamic income, progressive taxes, and the timing of charitable contributions. *Journal of Political Economy*, 103(4), 709–738.

[Article](#) [Google Scholar](#)

Rawls, J., Ullrich, R., & Nelson, O., Jr. (1975). A comparison of managers entering or reentering the profit and nonprofit sectors. *Academy of Management Journal*, 18, 616–623.

[Article](#) [Google Scholar](#)

Ribar, D. C., & Wilhelm, M. O. (1995). Charitable contributions to international relief and development. *National Tax Journal*, 48(2), 229–244.

[Google Scholar](#)

Ribar, D. C., & Wilhelm, M. O. (2002). Altruistic and joy-of-giving motivations in charitable behavior. *Journal of Political Economy*, 110, 425–457.

[Article](#) [Google Scholar](#)

Ricketts, R. C., & Westfall, P. H. (1993). New evidence on the price elasticity of charitable contributions. *Journal of the American Taxation Association*, 15, 1–25.

[Google Scholar](#)

Roberts, R. (1987). Financing public goods. *The Journal of Political Economy*, 95, 420–437.

Roomkin, M., & Weisbrod, B. (1999). Managerial compensation and incentives in for-profit and nonprofit hospitals. *Journal of Law, Economics, and Organization*, 15, 750–781.

[Article](#) [Google Scholar](#)

Rose-Ackerman, S. (1980). United Charities: An economic analysis. *Public Policy*, 28, 323–348.

[Google Scholar](#)

Rose-Ackerman, S. (1981). Do government grants to charity reduce private donations? In Michelle White (Ed.), *Nonprofit firms in a three-sector economy*. Washington, DC: The Urban Institute.

[Google Scholar](#)

Rose-Ackerman, S. (1982). Unfair competition and corporate income taxation. *Stanford Law Review*, 34, 1017–1039.

[Article](#) [Google Scholar](#)

Rose-Ackerman, S. (1983). Charitable giving and “Excessive” fundraising. *Quarterly Journal of Economics*, 97, 195–212.

[Google Scholar](#)

Rose-Ackerman, S. (1987). Ideals versus dollars: Donors, charity managers, and government grants. *Journal of Political Economy*, 95, 810–23.

[Article](#) [Google Scholar](#)

Ruhm, C. J., & Borkoski, C. (2000). *Compensation in the nonprofit sector*. Working

paper 7562, National Bureau of Economic Research, Cambridge, MA.

[Google Scholar](#)

Salamon, L. (1987). Of market failure, voluntary failure, and third-party government: Toward a theory of government-nonprofit relations in the modern Welfare State. *Journal of Voluntary Action Research*, 16, 29-49.

[Google Scholar](#)

Salamon, L., & Anheier, H. K. (1992). In search of the nonprofit sector: The question of definitions. *Voluntas*, 3, 125-152.

[Article](#) [Google Scholar](#)

Samuelson, P. (1947). *Foundations of economic analysis*. Cambridge, MA: Harvard U. Press.

[Google Scholar](#)

Sargeant, A., & Kähler, J. (1999). Returns on fundraising expenditures in the voluntary sector. *Nonprofit Management and Leadership*, 10, 5-20.

[Article](#) [Google Scholar](#)

Schiff, J. (1985). Does government spending crowd out charitable contributions? *National Tax Journal*, 38, 535-546.

[Google Scholar](#)

Schiff, J. (1990). *Charitable giving and government policy: An economic analysis*. Westport, CT: Greenwood Press.

[Google Scholar](#)

Schiff, J., & Steinberg, R. (1988). *The effect of federal government expenditure cutbacks on service provision by states and nonprofit organizations*. Working Paper, Department of Economics, Virginia Polytechnic Institute and State University, Blacksburg, VA.

[Google Scholar](#)

Schiff, J., & Weisbrod, B. A. (1991). Competition between for-profit and nonprofit organizations in commercial markets. *Annals of Public and Cooperative Economics*, 62, 619–640.

[Article](#) [Google Scholar](#)

Schlesinger, M. (1985). *Economic models of nonprofit organizations: A reappraisal of the property rights approach*. Working Paper, JFK School, Harvard University.

[Google Scholar](#)

Sefton, M., & Steinberg, R. (1996). Reward structures in public goods experiments. *Journal of Public Economics*, 58, 263–287.

[Article](#) [Google Scholar](#)

Segal, L. M., & Weisbrod, B. A. (1998). Interdependence of commercial and donative revenues. In Burton A. Weisbrod, (Ed.), *To profit or not to profit: The commercial transformation of the nonprofit sector*. New York: Cambridge University Press.

[Google Scholar](#)

Simon, J. (1987). The tax treatment of nonprofit organizations: A review of federal and state policies. In Walter W. Powell (Ed.), *The nonprofit sector: A research handbook*. New Haven: Yale University Press.

[Google Scholar](#)

Spiegel, M. (1995). Charity without altruism. *Economic Inquiry*, 33(4), 625–640.

[Article](#) [Google Scholar](#)

Steinberg, R. (1986). Should donors care about fund raising? In Rose-Ackerman, S. (Ed.), *The economics of nonprofit institutions: Studies in structure and policy*. New York: Oxford University Press.

[Google Scholar](#)

Steinberg, R. (1987a). Voluntary donations and public expenditures in a federalist system. *American Economic Review*, 77, 24–36.

[Google Scholar](#)

Steinberg, R. (1987b). Nonprofits and the market. In Walter W. Powell (Ed.), *The nonprofit sector: A research handbook*. New Haven: Yale University Press.

[Google Scholar](#)

Steinberg, R. (1988a). *Fairness and efficiency in the competition between for-profit and nonprofit firms*. Working Paper No. 132, Program on Nonprofit Organizations, Yale University.

[Google Scholar](#)

Steinberg, R. (1988b). *Tax credits for charitable giving*. Working Paper, Department of Economics, Virginia Polytechnic Institute and State University, Blacksburg, VA.

[Google Scholar](#)

Steinberg, R. (1990a). Profits and incentive compensation in nonprofit firms. *Nonprofit Management and Leadership*, 1(2), 137–151.

Steinberg, R. (1990b). Taxes and giving: New findings. *Voluntas*, 1, 61–79.

[Article](#) [Google Scholar](#)

Steinberg, R. (1991a). Does government spending crowd out donations? Interpreting the evidence. *Annals of Public and Cooperative Economics*, 62, 591–618.

[Article](#) [Google Scholar](#)

Steinberg, R. (1991b). The economics of fundraising. In Dwight Burlingame & Monty Hulse (Eds.), *Taking fund raising seriously*. San Francisco, CA: Jossey-Bass.

[Google Scholar](#)

Steinberg, R. (1991c). “Unfair” competition by nonprofits and tax policy. *National Tax Journal*, XLIV, 351–364.

[Google Scholar](#)

Steinberg, R. (1993a). Public policy and the performance of nonprofit organizations: A general framework. *Nonprofit and Voluntary Sector Quarterly*, 22(1), 13–32.

[Article](#) [Google Scholar](#)

Steinberg, R. (1993b). How should antitrust laws apply to nonprofit organizations? In Dennis R. Young, Robert M. Hollister, Virginia A. Hodgkinson, & Associates (Eds.), *Governing, leading, and managing nonprofit organizations* (pp. 279–305). San Francisco: Jossey-Bass.

[Google Scholar](#)

Steinberg, R. (1994a). *United Cancer Council v. Commissioner of the IRS and the Indirect Regulation of Fundraising*. Working Paper, Indiana University Center on Philanthropy, Indianapolis, IN.

[Google Scholar](#)

Steinberg, R. (1994b). Economics and philanthropy: A marriage of necessity for nonprofit organizations. In James M. Greenfield (Ed.) *Financial practices for effective fundraising* (volume title), *New directions in philanthropic fundraising* (vol. 3, pp. 7-26).

[Google Scholar](#)

Steinberg, R. (1995). What the numbers say. *Advancing Philanthropy*, 3(2), 26-31.

[Google Scholar](#)

Steinberg, R. (1997a). Competition in contracted markets. In Perri 6 & Jeremy Kendall (Eds.), *The contract culture in public services* (pp. 161-180). Brookfield, VT: Ashgate.

[Google Scholar](#)

Steinberg, Richard. (1997b). On the regulation of fund raising. In Dwight Burlingame (Ed.), *Critical issues in fund raising*. New York: John Wiley and Sons.

[Google Scholar](#)

Steinberg, R., & Eckel, C. C. (1995). *A deeper look at the tax preferences given nonprofit organizations*. Working Paper, Indiana University Center on Philanthropy, Indianapolis, IN.

[Google Scholar](#)

Steinberg, R., & Gray, B. (1993). 'The Role of Nonprofit Enterprise' in 1992:

Hansmann Revisited. *Nonprofit and Voluntary Sector Quarterly*, 22, 297-316.

[Article](#) [Google Scholar](#)

Steinberg, R., & Weisbrod, B. (2000). *Give it away or make them pay? Price discrimination by nonprofit organizations with distributional objectives*. Working Paper, IUPUI Department of Economics, Indianapolis, IN.

[Google Scholar](#)

Steinwald, B., & Neuhauser, D. (1970). The role of the proprietary hospital. *Law and Contemporary Problems*, 35, 817-838.

[Article](#) [Google Scholar](#)

Steurle, E. (1977). Distribution requirements for foundations. *Papers and Proceedings of Annual Meeting*. Columbus, Ohio: National Tax Association-Tax Institute of America.

[Google Scholar](#)

Straub, J. (2000). *Fundraising and government crowd-out of private contributions to public radio: An empirical study*. Working Paper, Department of Economics, University of Wisconsin, Madison.

[Google Scholar](#)

Toolson, R. B. (1990). The charitable contribution deduction: New evidence of a strong incentive effect. *Advances in Taxation*, 2, 107-129.

[Google Scholar](#)

Tuckman, H. P. & Chang, C. F. (1992). Nonprofit equity: A behavioral model and its policy implications. *Journal of Policy Analysis and Management*, 11(1), 76-87.

[Article](#) [Google Scholar](#)

Tuckman, H. P., & Chang, C. F. (1993). Accumulating financial surpluses in nonprofit organizations. In Dennis R. Young, Robert M. Hollister, Virginia A. Hodgkinson, & Associates (Eds.), *Governing, leading, and managing nonprofit organizations* (pp. 253–278). San Francisco: Jossey-Bass.

[Google Scholar](#)

Tullock, G. (1966). Information without profit. *Papers on Non-Market Decisionmaking*, 1, 141–159.

[Google Scholar](#)

Vickrey, W. S. (1962). One economist's view of philanthropy. In Frank G. Dickinson (Ed.), *Philanthropy and public policy*. Cambridge, MA: National Bureau for Economic Research.

[Google Scholar](#)

Vinokur-Kaplan, D. (1996). Workplace attitudes, experiences, and job satisfaction of social work administrators in nonprofit and public agencies: 1981 and 1989. *Nonprofit and Voluntary Sector Quarterly*, 25, 89–109.

[Article](#) [Google Scholar](#)

Wedig, G. (1994). Risk, leverage, donations and dividends-in-kind: A theory of nonprofit financial behavior. *International Review of Economics and Finance*, 3, 257–278.

[Article](#) [Google Scholar](#)

Wedig, G., Hassan, M., & Morrissey, M. (1996). Tax-exempt debt and the capital structure of nonprofit organizations. *Journal of Finance*, 51, 1247–1283.

[Article](#) [Google Scholar](#)

Weinberg, C. B. (1980). Marketing mix decision rules for nonprofit organizations. *Research in Marketing*, 3, 191-234.

[Google Scholar](#)

Weisbrod, B. (1975). Toward a theory of the voluntary nonprofit sector in a three-sector economy. In Edmund Phelps (Ed.), *Altruism, morality and economic theory*. New York: Russell Sage Foundation.

[Google Scholar](#)

Weisbrod, B. (1983). Non-profit and proprietary sector behavior: Wage differentials among lawyers. *Journal of Labor Economics*, 1, 246-263.

[Article](#) [Google Scholar](#)

Weisbrod, B. (1988). *The nonprofit economy*. Cambridge, MA: Harvard University Press.

[Google Scholar](#)

Weisbrod, B. (with the assistance of Elizabeth Mausser). (1991). Tax policy toward nonprofit organizations: An eleven-country survey. *Voluntas*, 2, 3-25.

[Article](#) [Google Scholar](#)

Weisbrod, B. (Ed.). (1998). *To profit or not to profit: The commercial transformation of the nonprofit sector*. New York, NY: Cambridge University Press.

[Google Scholar](#)

Weisbrod, B., & Schlesinger, M. (1986). Public, private, nonprofit ownership and the response to asymmetric information: The case of nursing homes. In Susan

Rose-Ackerman (Ed.), *The nonprofit sector: Economic theory and public policy*. Fairlawn, NJ: Oxford University Press.

[Google Scholar](#)

Winkle, C. (1990). *Supply-side theory of the role of the nonprofit sector: An analysis of two case studies*. Working Paper, School of Urban Planning and Policy, University of Illinois-Chicago, Chicago, IL.

[Google Scholar](#)

Wolff, N., Weisbrod, B., & Bird, E. (1993). The supply of volunteer labor: The case of hospitals. *Nonprofit Management and Leadership*, 4(1), 23-46.

[Article](#) [Google Scholar](#)

Wolpert, J. (1977). Social income and the voluntary sector. *Papers, Regional Science Association*, 39, 217-229.

[Article](#) [Google Scholar](#)

Wong, C. M. C., Vincent C. H., & Vasoo, S. (1998). Contributions to charitable organizations in a developing country: The case of Singapore. *International Journal of Social Economics*, 25, 25-42.

[Article](#) [Google Scholar](#)

Yamauchi, N. (1999). *Tax incentives to donations: Evidence from Japanese data*. Working Paper, Osaka School of International Public Policy, Osaka University.

[Google Scholar](#)

Young, D. R. (1983). *If not for profit, for what?* Lexington, MA: D.C. Heath.

[Google Scholar](#)

Young, D. R. (1989). Local autonomy in a franchise age: Structural change in national voluntary associations. *Nonprofit and Voluntary Sector Quarterly*, 18, 101-117.

[Article](#) [Google Scholar](#)

Young, D. R., Standley, A. P., & Hiedemann, S. (1995). *Structural variation and change in national nonprofit associations: Case studies in social services and health charities*. Paper presented at the 1995 ARNOVA conference, Cleveland OH.

[Google Scholar](#)

Young, D. R., & Steinberg, R. (1995). *Economics for nonprofit managers*. New York: The Foundation Center Press.

[Google Scholar](#)

Zhang, C. (2000). *How does government funding affect private donations to research universities*. Unpublished M.A. thesis in Economics, IUPUI.

[Google Scholar](#)

Ziliak, S. T. (1996). *The contradiction of compassion: Private charity and the 'Solution' to dependence*. Paper presented at the Allied Social Science Association Meetings, San Francisco.

[Google Scholar](#)

6 Perri & Forder, J. (1996). Can campaigning be evaluated? *Nonprofit and Voluntary Sector Quarterly*, 25, 225-247.

[Article](#) [Google Scholar](#)

6 Perri & Forder, J. (Eds.) (1997). *The contract culture in public services: Studies*

Author information

Authors and Affiliations

Indiana University-Purdue University, Indianapolis, Indiana, 46202-5140, USA

Richard Steinberg

Editor information

Editors and Affiliations

University of California, Los Angeles, California, 90095-1656, USA

Helmut K. Anheier

London School of Economics and Political Science, London, UK

Helmut K. Anheier

University of Minnesota, Minneapolis, Minnesota, 55455, USA

Avner Ben-Ner

Rights and permissions

[Reprints and permissions](#)

Copyright information

© 2003 Springer Science+Business Media New York

About this chapter

Cite this chapter

Steinberg, R. (2003). Economic Theories of Nonprofit Organizations. In: Anheier, H.K., Ben-Ner, A. (eds) The Study of the Nonprofit Enterprise. Nonprofit and Civil Society Studies. Springer, Boston, MA.
https://doi.org/10.1007/978-1-4615-0131-2_16

[.RIS↓](#) [.ENW↓](#) [.BIB↓](#)

DOI	Publisher Name	Print ISBN
https://doi.org/10.1007/978-1-4615-0131-2_16	Springer, Boston, MA	978-0-306-47855-0
Online ISBN	eBook Packages	
978-1-4615-0131-2	Springer Book Archive	

Publish with us

[Policies and ethics](#) 

Search

Search by keyword or author



Navigation

Find a journal

Publish with us

Track your research

