

Economics 414

Syllabus

Fall 1998

Professor John P. Conley

Public Finance is the study of the role of government in the economy. We will take a modern general equilibrium and game theoretic approach instead of the traditional partial equilibrium and intuitional one. The main focus of this course will be to survey the basic tools and results that theoretical and empirical researchers will need to work in the field. Students interested in the policy implications of public finance issues will also find this background very beneficial. Primary attention will be given to the expenditure side of the economy, especially to externalities, public goods, and local public goods. I will assume that students have a background in value theory, and understand the basic workings of a competitive general equilibrium economy. The mathematics used in this course will not be especially advanced. Differential calculus, and perhaps some familiarity with the basic notions of real analysis will suffice. You may wish to purchase a book like:

Kolmogorov, A. N., and S. V. Fomin (1970): *Introductory Real Analysis*.
Dover, New York.

The first four chapters covers all the math you in need. It goes into much more detail than we will require, but it is a nice, concise reference that contains all the definitions and basic results that we will use. Of course it would not hurt you to learn the first four chapters. If you are planning to continue in any sort of theory field, you would be doing yourself a great service. For the purposes of this class, however, you may skim it and refer to it as needed.

Grading will be based on a three factors. An in-class presentation of an article not on the reading list will be worth 10%. I will give a final exam worth 40%, and the remaining 50% will be based on a paper. This paper may either be a survey of one of the subfields covered in course (perhaps covering four to eight papers), or an original piece of work. I am more than happy to accommodate students with

other interests who would like to substitute any comparable project. The paper will be due at the end of finals week of the *spring* semester. I am reluctant to grant extensions. This is meant to be a seminar course, and so I strongly encourage class participation. I also encourage you to have a look at the articles before class.

There are two main text books for this course:

Cornes, Richard, and Todd Sandler (1996): *The Theory of Externalities, Public Goods, and Club Goods*. second edition, Cambridge University Press, Cambridge.

Mueller, D. (1989): *Public Choice II*. Cambridge University Press, Cambridge.

You may also want to look at:

Laffont, Jean-Jacques (1990): *Fundamentals of Public Economics*. MIT Press, Cambridge.

Laffont may be viewed as a substitute for Cornes and Sandler. Both books cover the basic material have the advantage of being presentations with consistent notation. However, I don't really like either book. You should think of these two books as references, but not central to the course. Mueller, on the other hand, is the best survey around on public choice, and will be the main reference for this part of the course.

I have indicated with two stars the articles which I think merit the most attention. Sometimes this is because they are very important, and sometimes because they are classics. Articles with one star are also important in the field, and articles without stars are included for students especially interested in a particular topic. I have listed the articles in the approximate order of their presentation.

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1. Introduction

Cornes and Sandler, Chapters 1 and 2

Thomson, W. (1996): "Writing Papers," University of Rochester Working Paper No. 417.

2. Externalities

Cornes and Sandler, Chapters 3 and 4

- ** **Coase, R.** (1960): "The Problem of Social Cost," *Journal of Law and Economics*, October, 1-44.
- ** **Arrow, K.** (1970): "The Organization of Economic Activity: Issues Pertinent to the Choice of Market Versus Non-Market Allocation," in *Public Expenditure and Policy Analysis*, by R. H. Haveman and J. Margolis, Eds..
- ** **Starrett, D.** (1972): "Fundamental Non-Convexities in the Theory of Externalities," *Journal of Economic Theory*, Vol. 4, 180-199.
Starrett, D. (1973): "A Note on Externalities and the Core," *Econometrica*, Vol. 41, 179-183.
- * **Baumol, W.** (1972): "On Taxation and the Control of Externalities," *American Economic Review*, June, 307-322.
- * **Thompson, E. and R. Batchelder** (1974): "On Taxation and the Control of Externalities: Comment," *American Economic Review*, Vol. 64, 467-471.
- * **Baumol, W.** (1974): "On Taxation and the Control of Externalities: Reply," *American Economic Review*, Vol. 64, 472.
- * **Shapley, L. and M. Shubik** (1969): "On the Core of an Economic System with Externalities," *American Economic Review*, Vol. 59, 678-684.
- * **Aivazian, V., J. Callen, and I. Lipnowski** (1987): "The Coase Theorem and Coalitional Stability," *Economica*, Vol. 54, 517-20.
Hurwicz, L. (1995): "What is the Coase Theorem?," *Japan and the World Economy*, Vol. 7, 49-74.
- ** **Boyd, J. H. III, and J. Conley** (1996): "Fundamental Nonconvexities in Arrowian Markets and a Coasian Solution to the Problem of Externalities," *Journal of Economic Theory*, Vol. 72, 377-407.

Conley, J. and S. Smith (1998): “Coasian Equilibrium,” Manuscript.

3. Public Goods

Cornes and Sandler, Chapters 5,6,7,8 and 9

Lindahl, E. (1919): “Positive Losung, Die Gerechtigkeit der Besteuerung translated as Just Taxation - A Positive Solution,” in *Classics in the Theory of Public Finance*, by R. A. Musgrave and A. T. Peacock, Eds., Macmillan, London.

** **Thomson, W.** (1998): “Economies with Public Goods: An Elementary Geometric Exposition,” *Journal of Public Economic Theory*, Forthcoming.

** **Samuelson, P. A.** (1954): “The Theory of Public Expenditures,” *Review of Economics and Statistics*, November.

* **Samuelson, P. A.** (1955): “Diagrammatic Exposition of the Theory of Public Expenditures,” *Review of Economics and Statistics*, November.

* **Samuelson, P. A.** (1966): “Pure Theory of Public Expenditure and Taxation,” in *Public Economics*, by Margolis and Guitton, Eds..

** **Foley, D. K.** (1970): “Lindahl’s Solution and the Core of an Economy with Public Goods,” *Econometrica*, Vol. 38, 66-72.

* **Roberts, D. J.** (1974): “The Lindahl Solution for Economies with Public Goods,” *Journal of Public Economics*, Vol. 3, 23-42.

Milleron, J. C. (1972): “Theory of Value with Public Goods: A Survey Article,” *Journal of Economic Theory*, Vol. 5, 419-477.

* **Conley, J. and Dimitrios Diamantaras** (1996): “Generalized Samuelson Conditions and Welfare Theorems for Nonsmooth Economies,” *Journal of Public Economics*, Vol. 59, 137-52.

* **Muench, T.** (1972): “The Core and the Lindahl Equilibrium of an Economy with a Public Good: An Example,” *Journal of Economic Theory*, Vol. 4, 241-255.

* **Conley, J.** (1994): “Convergence Theorems on the Core of a Public Goods Economy: Sufficient Conditions,” *Journal of Economic Theory*, Vol. 62, 161-85.

- * **Mas-Colell, A.** (1980): “Efficiency and Decentralization in the Pure Theory of Public Goods,” *Quarterly Journal of Economics*, Vol. 47, 239-56.
- * **Mas-Colell, A., and J. Silvestre** (1989): “Cost Share Equilibrium: A Lindahl Approach,” *Journal of Economic Theory*, Vol. 47, 239-56.
- Weber, S., and H. Wiesmuth** (1991): “The Equivalence of the Core and Cost Share Equilibria in an Economy with a Public Good,” *Journal of Economic Theory*, Vol. 54, pp 180-97.

4. Local Public Goods

Cornes and Sandler, Chapters 10,11 12,13,14, and 15

- ** **Tiebout, C.** (1956): “A Pure Theory of Local Expenditures,” *Journal of Political Economy*, Vol. 64, 416-424.
- ** **Buchanan, J.** (1965): “An Economic Theory of Clubs,” *Economica*, Vol. 32, 1-14.
- ** **Bewley, T.** (1981): “A Critique of Tiebout’s Theory of Local Public Expenditures,” *Econometrica*, Vol. 49, 713-740.
- ** **Wooders, M.** (1978): “Equilibria, the Core, and Jurisdiction Structures in Economies with a Local Public Good,” *Journal of Economic Theory*, Vol. 18, 328-348.
- * **Scotchmer, S. and M. Wooders** (1986): “Mixed Clubs: Pareto Optimality, the Core and Competition,” *Discussion Paper # 1221, Harvard Institute of Economic Research (Published in Journal of Public Economics)*, .
- ** **Scotchmer, S. and M. Wooders** (1986): “Optimal and Equilibrium Organizations,” *Working paper*, .
- * **Scotchmer, S., and M. Wooders** (1987): “Competitive Equilibrium and the Core in Club Economies with Anonymous Crowding,” *Journal of Public Economics*, Vol. 34 pp. 159-73.
- Wooders, M.** (1980): “The Tiebout Hypothesis: Near Optimality in Local Public Goods Economies,” *Econometrica*, Vol. 48, 1467-1485.
- Westhoff, F.** (1977): “Existence of Equilibrium with a Local Public Good,” *Journal of Economic Theory*, Vol 14, 84-112.

- * **Berglas, E.** (1976): “On the Theory of Clubs,” *American Economic Review*, Vol. 66, pp. 116-121.
- * **Berglas, E.** (1984): “Quantities, Qualities, and Multiple Public Services in the Tiebout Model,” *Journal of Public Economics*, Vol. 25, pp. 299-321.
- Berglas, E. and D. Pines** (1984): “Clubs, Local Public Goods, and Transportation Models: a Synthesis,” *Journal of Public Economics*, Vol 15, pp 141-162.
- ** **Conley, J., and M. Wooders** (1997): “Anonymous Pricing in Public Goods Economies,” in *Topics in Public Economics*, by D. Pines, E. Sadka, and I Zilcha, eds. Cambridge University press.
- ** **Conley, J., and M. Wooders** (1997): “Equivalence of the Core and Competitive Equilibrium in a Tiebout Economy with Crowding Types,” *Journal of Urban Economics*, Vol. 41 pp. 421-440.
- * **Conley, J., and M. Wooders** (1997): “Taste-Homogeneity of Optimal Jurisdictions in a Tiebout Economy with Crowding Types and Endogenous Educational Investment Choices,” *Ricerche Economiche*, Vol. 50 pp. 367-87.
- * **Conley, J., and M. Wooders** (1997): “Tiebout Economies with Differential Genetic Types and Endogenously Chosen Crowding Characteristics,” Manuscript.
- Nechyba, T.,** (1996): “Existence of Equilibrium and Stratification in Local and Hierarchical Tiebout Economies with Property Taxes and Voting,” NBER Technical Working Paper 190.
- Wilson, J.,** (1987): “Trade in a Tiebout Economy,” *American Economic Review*, Vol. 77, 431-41.
- Arnott, R., and M. Kraus** (1994): “When are Anonymous Congestion Charges Consistent with Marginal Cost Pricing,” NBER Technical Working Paper 154.
- Page, S., K. Kollman, and J. Miller** (1995): “A Comparison of Political Institutions in a Tiebout Model,” *American Economic Review*, Forthcoming.
- Berglas, E. and D. Pines** (1980): “Clubs as a Case of Competitive Industry with Goods of Variable Quality,” *Economics Letters*, Vol. 5, pp. 363-366.

Brueckner, J. (1994): "Tastes, Skills, and Local Public Goods," *Journal of Urban Economics*, Vol. 35, 201-20.

Brueckner, J., K. Lee (1989): "Club Theory with a Peer-Group Effect," *Regional Science and Urban Economics*, Vol. 19, pp. 399-420.

Rose-Ackerman, S. (1979): "Market Models of Local Government: Exit, Voting, and the Land Market," *Journal of Urban Economics*, Vol. 6, 319-337.

Henderson, J. (1985): "The Tiebout Model: Bring Back the Entrepreneurs," *Journal of Political Economy*, Vol. 93 248-64.

Henderson, J. (1991): "Separating Tiebout Equilibrium," *Journal of Urban Economics*, Vol. 29, 128-52.

Ellickson, B. (1979): "Competitive Equilibrium with Local Public Goods," *Journal of Economic Theory*, Vol. 21, 46-61.

Sandler, T. and J. Tschirhart (1980): "The Economic Theory of Clubs: An Evaluative Survey," *Journal of Economic Literature*, Vol. 18, 1481-1521.

- * **Wooders, M.** (1992): "Large Games and Economies with Small Effective Groups," Working paper.
- * **Epple D., and R. Romano** (1994): "Competition Between Private and Public Schools, Vouchers and Peer Group Effects," *American Economic Review*, Forthcoming.

5. Free Rider Problems and Incentives

Mueller, Chapter 8

- * **Clarke, E.** (1971): "Multipart Pricing of Public Goods," *Public Choice*, Vol. 11, 17-33.
- Green, J. and J. J. Laffont** (1980): *Incentives in Public Decision Making*. North-Holland, Amsterdam.
- * **Groves, T. and J. Ledyard** (1977): "Optimal Allocation of Public Goods: A Solution to the 'Free Rider' Problem," *Econometrica*, Vol. 45, 783-809.
- ** **Warr, P.** (1982): "Pareto Optimal Redistribution and Private Charity," *Journal of Public Economics*, Vol. 19 131-8.

Bergstrom, T., L. Blume, and H. Varian (1986): "On the Private Provision of Public Goods," *Journal of Public Economics*, Vol. 29 25-49.

Jackson, M., and H. Moulin (1992): "Implementing a Public Project and Distributing its Cost," *Journal of Economic Theory*, Vol. 57, pp 125-140.

Chakravorti, B., J. Conley, and B. Taub (1992): "Economic Applications of Probabilistic Cheap Talk," in *Topics in Mathematical Economics and Game Theory*, by M. Wooders, ed., Forthcoming.

Bagnoli, M. and Lipman, Barton (Provision of Public Goods: Fully Implementing the Core through Private Contributions): "1989," *Review of Economic Studies*, Vol. 56, pp 583-601.

6. Voting

** Mueller, Chapters 4,5,6, and 7

Mueller, D. (1976): "Public Choice: A Survey," *Journal of Economic Literature*, June.

Aumann, R., M. Kurz, and A. Neyman (1987): "Power and Public Goods," *Journal of Economic Theory*, Vol. 42, 108-27.

Conley, J., and A. Temimi (1995): "Endogenous Enfranchisement when Groups' Preferences are Conflicting," Manuscript.

7. Cost Benefit Analysis

** **Willig, R.** (1976): "Consumer's Surplus Without Apology," *American Economic Review*, September.

* **Diamond, P. and D. McFadden** (1974): "Some Uses of the Expenditure Function in Public Finance," *Journal of Public Economics*, Vol. 3, 3-21.

* **Arrow, K. and R. Lind** (1970): "Uncertainty and the Evaluation of Public Investment Decisions," *American Economic Review*, Vol. 60, 364-378.

Graham, D. A. (1981): "Cost-Benefit Analysis Under Uncertainty," *American Economic Review*, Vol. 71, 715-725.