

Topics in Dynamic Optimal Taxation: Course Outline

Charles Brendon*
European University Institute

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Overview

This series of lectures will explore some of the most important contributions to the theory of optimal tax policy in dynamic economies. A huge number of papers could conceivably fit beneath this umbrella subject, and I make no claim to completeness. Instead I've tried to pick out some of the areas that remain an active focus for research, and/or those whose motivating questions seem particularly current. The relevant questions are, on the whole, at the grander end of the scale. They include: 'How should taxes and public debt respond to unforeseen expenditure shocks?'; 'How progressive should income and savings taxes be?'; and 'How should bequests be taxed?' We will see how differing assumptions about the structure of the economy and the set of tax instruments at the government's disposal affect answers to these.

Contact

My office is in the Badia (BF 020, Bank Corridor), but I am often around in the economics department. If you want to discuss the course material and/or problem sets either stop me in person or send me an email.

Timings

With one exception the lectures will take place every **Monday from 11am to 1pm** in VSP 1 or 2, from February 24th to March 24th inclusive. The one exception is the penultimate lecture, which will be from 11am to 1pm on **Tuesday March 18th, instead of Monday 17th.**

Assessment

The assessment will be based on two problem sets (50% each).

*charles.brendon@eui.eu

Structure

The course will consist of five lectures, each of two hours. It will be divided broadly into two parts, the first looking at models of optimal taxation and debt management in single-agent economies in response to government expenditure shocks, and the second looking at optimal taxation over time when individuals have heterogeneous earnings capacities. I will circulate a different set of notes for each of these two parts. If there is sufficient time and interest I may also give a brief introduction to the ‘classic’ results on optimal capital taxation, squeezed between topics 2 and 3 below. I’ll do this on the basis of slides rather than notes, and will provide you with these as a separate handout.

Each lecture will take as its starting point at least one influential paper in the literature. You should make the effort to read these principal works in advance: I would like some interaction. The other readings listed below are a mixture of ‘seminal’ articles, useful review pieces, and more recent research that will be discussed in the lectures. My *ex ante* plan for the course is as follows (I reserve the right to adjust this slightly as we go along...):

1. Introduction to the Ramsey taxation problem; optimal debt management when securities markets are complete

Main reading:

- Lucas, R.E. Jr, and N.L. Stokey (1983), ‘Optimal fiscal and monetary policy in an economy without capital’, JME ,12, 55–93.

Further readings:

- Atkinson, A.B., and J.E. Stiglitz (1980), *Lectures on Public Economics* (Second Ed.), McGraw-Hill, Chapter 12. (*Good introduction to ‘traditional’ static Ramsey problems.*)
- Ljungqvist, L., and T.J. Sargent (2012), *Recursive Macroeconomic Theory*, Third Edition, MIT Press, Chapter 16. (*Especially sec. 16.13 onwards.*)

2. Debt management with incomplete markets

Main reading:

- Aiyagari, S.R., A. Marcet, T.J. Sargent and J. Seppälä (2001), ‘Optimal taxation without state-contingent debt’, JPE, 110, 1220–1254.

Further readings:

- Angeletos, G-M. (2002), ‘Fiscal Policy with Non-Contingent Debt and Optimal Maturity Structure’, QJE, 27, 1105–1131. (*Read either this or Buera & Nicolini – they make the same point.*)
- Barro, R.J. (1979), ‘On the Determination of the Public Debt’, JPE, 87, 940–971. (*In many ways the motivation for the AMSS paper.*)

- Benigno, P., and M. Woodford (2003), ‘Optimal Monetary and Fiscal Policy: A Linear-Quadratic Approach’, NBER Macroeconomics Annual 2003, 18, 271–333. (*Fiscal smoothing in a New Keynesian setting – see also Schmitt-Grohé & Uribe.*)
- Buera, F., and J.P. Nicolini (2004), ‘Optimal Maturity of Government Debt with Incomplete Markets’, JME, 51, 531–554.
- Faraglia, E., A. Marcet and A. Scott (2010), ‘In Search of a Theory of Debt Management’, JME, 57, 821–838. (*Critiques usefulness of Angeletos/Buera & Nicolini*)
- Lustig, H., C. Sleet and S. Yeltekin (2008), ‘Fiscal Hedging with Nominal Assets’, JME, 55, 710–727. (*Nice paper on possible tensions between nominal frictions and fiscal hedging.*)
- Schmitt-Grohé, S., and M. Uribe (2004), ‘Optimal Fiscal and Monetary Policy under Sticky Prices’, JET, 114, 198–230.

3. Optimal linear and non-linear taxes under heterogeneity; the static Mirrlees taxation problem

Main reading:

- Saez, E. (2001), ‘Using elasticities to derive optimal income tax rates’, REStud, 68, 205–229. (*Very influential – showed how model could be used to draw applied lessons.*)

Further readings:

- Diamond, P.A. (1998), ‘Optimal Income Taxation: An Example with a U-Shaped Pattern of Optimal Marginal Tax Rates’, American Economic Review, 88, 83–95. (*Influential paper showing importance of type distribution for optimal top rates.*)
- Diamond, P.A., and E. Saez (2011), ‘The Case for a Progressive Tax: From Basic Research to Policy Recommendations’, Journal of Economic Perspectives, 25, 165–190. (*Easy survey, taking aim at the Mankiw et al piece cited below.*)
- Mankiw, N.G., M. Weinzierl and D. Yagan (2009), ‘Optimal Taxation in Theory and Practice’, Journal of Economic Perspectives, 23, 147–174.
- Mirrlees, J.A. (1971), ‘An Exploration in the Theory of Optimal Income Taxation’, Review of Economic Studies, 38, 175–208. (*The original article: hard work.*)
- Piketty, T., and E. Saez (2013), ‘Optimal Labor Income Taxation’, Handbook of Public Economics, vol. 5. (*Good survey of recent applied literature on Mirrlees model and related tax questions.*)

4. The dynamic Mirrlees model (1): model outline, savings distortions, and long-run implications

Main reading:

- Golosov, M., A. Tsyvinski and I. Werning (2006), ‘The New Dynamic Public Finance: A User’s Guide’, *NBER Macroeconomics Annual 2006*, 317–363. (*Kocherlakota book below is alternative introduction.*)

Further readings:

- Diamond, P.A., and J.A. Mirrlees (1978), ‘A model of social insurance with variable retirement’, *Journal of Public Economics*, 10, 295–336. (*First to derive inverse Euler condition in 2-period dynamic taxation setting.*)
- Golosov, M., N.R. Kocherlakota and A. Tsyvinski (2003), ‘Optimal Indirect and Capital Taxation’, *Review of Economic Studies*, 70, 569–587. (*One of the initial papers in the NDPF literature – quite readable.*)
- Kocherlakota, N.R. (2005), ‘Zero Expected Wealth Taxes: A Mirrlees Approach to Dynamic Optimal Taxation’, *Econometrica*, 73, 1587–1621. (*Best paper I know of on the decentralisation issue.*)
- Kocherlakota, N.R. (2010), *The New Dynamic Public Finance*, Princeton, Princeton University Press. (*Book-length introduction to literature.*)
- Rogerson, W.P. (1985), ‘Repeated Moral Hazard’, *Econometrica*, 53, 69–76. (*Derived inverse Euler for infinite-horizon repeated moral hazard problem – first brought attention to implied dynamic distortions.*)
- Thomas, J., and T. Worrall (1990), ‘Income Fluctuation and Asymmetric Information: An Example of a Repeated Principal-Agent Problem’, *Journal of Economic Theory*, 51, 367–390. (*First to show immiseration result, in dynamic moral hazard setting.*)
- Werning, I. (2002), ‘Optimal Dynamic Taxation’, PhD Dissertation, University of Chicago. (*Started the recent NDPF literature, along with GKT.*)

5. The dynamic Mirrlees model (2): intergenerational distributive questions, recent results using the first-order approach

Main reading:

- Farhi, E., and I. Werning (2010), ‘Progressive Estate Taxation’, *QJE*, 125, 635–673.

Further readings:

- Farhi, E., and I. Werning (2007), ‘Inequality and Social Discounting’, *Journal of Political Economy*, 115, 356–402. (*Highlights implications of intrinsic weight placed by policymaker on future generations: 2010 paper is application of this.*)
- Farhi, E., and I. Werning (2012), ‘Insurance and Taxation over the Life Cycle’, *Review of Economic Studies*, 80, 596–635. (*Uses first-order approach to obtain novel results on labour wedge dynamics, gains from fully optimal policy.*)
- Golosov, M., M. Troskin and A. Tsyvinski (2011), ‘Optimal Dynamic Taxes’, working paper. (*Takes similar approach to FW’s 2012 paper – worth reading one or the other.*)
- Phelan, C. (2006), ‘Opportunity and Social Mobility’, *Review of Economic Studies*, 73, 487–505. (*Considered implications of zero discounting for long-run allocations.*)
- Piketty, T., and E. Saez (2013), ‘A Theory of Optimal Inheritance Taxation’, *Econometrica*, 81, 1851–1866. (*Uses ‘elasticities approach’ to address similar questions to FW.*)