UNIVERSITY OF NOTTINGHAM SCHOOL OF ECONOMICS

ECON3080 Economic Policy Analysis II
Spring semester 2020/21
Module Outline

Lecturers
Dr BR Dijkstra (convenor) bouwe.dijkstra@nottingham.ac.uk
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Module Summary

This module will introduce students to economic policy analysis, using examples from environmental economics and public finance. The module is completely independent of ECON3027 Economic Policy Analysis I.

The first part of the module is about climate change. We first examine the practice of discounting future outcomes. We will look at evidence for climate change in the past and predictions for future damage. After exploring abatement options and costs, we can devise a globally optimal policy path, depending on the discount rate. Finally, we will trace actual climate change negotiations, evaluate climate change policy and examine why it is so difficult for countries to agree on greenhouse gas emission reductions.

The second part of the module will focus on optimal income tax and transfer theory and the empirical literature that estimates behavioural responses to progressive tax systems. In the first part, students will learn the core optimal income tax models (linear and non-linear) and study the optimal design of transfer programs. In the second part, we will cover empirical evidence on the responses of individuals to income taxes and transfers (e.g., labour supply responses, tax avoidance responses, migration) using various econometric methods. The course will include a short refresher lecture of the empirical tools used in Public Finance to bring students with different backgrounds up to speed.

Assessment

The assessment in this module takes the form of a take home exam at the end of the spring semester (word limit: 1000). The exam will consist of two sections. Section A, counting for 60%, will contain two equally weighted questions, one on each part of the module. You have to answer both questions. Section B, counting for 40%, will also contain two questions, one on each part of the module, but you only have to answer one question. Public finance is a new topic for this module. We will provide a list of relevant question from past exams on climate change. However, please bear in mind that the exam format this year is different than in previous years. You will have the opportunity to submit and receive feedback on practice essays.

Readings

The textbooks for this module are:

Perman, Ma, Common, Maddison, McGilvray (2011), *Natural Resource and Environmental Economics*, Fourth Edition, Addison Wesley.

Jonathan Gruber, Public Finance and Public Policy, 6th edition, Macmillan, 2019.
Optional textbook (the lectures follow loosely the Gruber book). Earlier editions of the textbook are totally fine.

In addition, both parts of the module make use of journal articles, official reports, etc. The full reading list is available on Moodle. Other readings discussed in Dr Tortarolo's lecture slides can be found at the back of each slide set with web links to the pdf files.

Teaching delivery

The *lecture material* will be delivered on a weekly basis in teaching weeks 1 through 7 (all before the Easter break). The lecture material consists mainly of lecture slides and recordings. Occasionally there will be a survey or a quiz. The material will start to appear on Mondays at 1pm (all times are local, i.e. GMT or BST). All the material for the week will be available by the Tuesday evening.

Note that w/c 15 February is a reading week. Some week 3 material may be uploaded this week.

The live online *engagement sessions* are on Mondays from 12-1pm in teaching weeks 2 through 8 (i.e. 8 Feb, 22 Feb through 22 Mar, 19 Apr). The purpose of the engagement sessions is to review the lecture material of the previous week. We will answer questions that you submitted via email or forum. We may go through your survey and quiz answers, and discuss news items or other material relevant to the topic. You will also have the opportunity to ask questions during the engagement session.

The deadline for submitting questions for the engagement sessions is usually 7am on the Saturday before the session. The exceptions are the session in week 3 (after the reading week), for which the deadline is 7am on Friday 12 February, and the session in week 8 (after the Easter break), for which the deadline is 7am on Friday 16 April. We will answer all of your questions, either in the engagement session or via email or forum.

There are two *tutorials* for this module. Dr Dijkstra will give the first tutorial on climate change in week 5 (w/c 8 Mar). Dr Tortarolo will give the second tutorial on public finance in week 8 (w/c 19 Apr). Both tutorials will be in-person if possible.

Lecture schedule

1. Climate change (Dr B Dijkstra)

Weeks 1/2 – The intertemporal dimension. Discounting future utility and consumption. Evidence for and projections of climate change and its costs. Abatement options and their costs. Integrated Assessment Models: The DICE model. Optimal climate change policy depending on discount rate and other factors.
Textbook reading: Perman Ch 3.5 up to 3.5.3, 9.5 up to 9.5.7, 11.1.4; Boxes 3.1, 13.1, 16.1

Weeks 3/4 – The international dimension. Theory of international environmental agreements. Actual climate change negotiations and agreements. Effectiveness of Kyoto Protocol.
Textbook reading: Perman Ch 9.1–3 (skipping p. 290 "As before…" to p. 291 end of 9.1.3), 9.5.7

2. Public Finance (Dr D Tortarolo)

Week 4 – Introduction and overview of the UK income tax-benefit system.
Readings: Pope and Waters (2016); Hood and Norris Keiller (2016); Brewer and Hoynes (2019).

Week 5 – Optimal income taxes and transfers. Core optimal income tax model: linear and nonlinear taxes. Optimal top income tax rate. Optimal design of transfers. Participation responses (extensive margin).
Textbook reading: Gruber, Chapters 20, 21 [lectures do not follow Gruber textbook closely]; Piketty and Saez '13 handbook chapter; Diamond and Saez 2011.

Week 6 – Behavioural responses to income taxation I. Labour supply responses to taxes and transfers: Key methodologies (non-linear budget sets, "bunching at the kinks"). Extensive and intensive margin.
Reading: Saez AEJ-EP 2010; Kleven 2019; other papers listed on the slides.

Week 7 – Behavioural responses to income taxation II. Responses of reported taxable income: Broader effects of taxation (beyond labour supply). Key methodologies (diff-in-diff and time series methods). Tax avoidance (income shifting and intertemporal substitution). Extensions: Migration and rent-seeking.
Reading: Saez, Slemrod, and Giertz JEL 2012; Piketty, Saez, and Stantcheva AEJ-EP 2014; other papers listed on the slides.