University of St.Gallen

Course and Examination Fact Sheet: Autumn Semester 2021

10,359: Designing Redistributive Policies

ECTS credits: 4

Overview examination/s

(binding regulations see below)
Decentral - examination paper written at home (individual) (100%)
Examination time: term time

Attached courses

Timetable -- Language -- Lecturer
10,359,1.00 Designing Redistributive Policies -- Englisch -- Sachs Dominik

Course information

Course prerequisites

Solid background in Public Economics and Macroeconomics at the Master level.

Learning objectives

How can a government mitigate inequality in an efficient manner? How can the trade-off between equity and efficiency be optimally solved? The learning objective of the course is that students will learn the state of the art methods in the theoretical, quantitative and empirical literature (public economics and macroeconomics) to tackle these questions.

First, students will learn modern theoretical tools to study the optimal design of nonlinear redistribution schemes (in particular, nonlinear income taxes). We will consider simplified versions of workhorse model of optimal income taxation (Diamond 1998, Saez 2001). We will briefly review the optimal control approach to derive optimality conditions. Then, we will study in more detail the modern (and simpler) perturbation techniques. The learning objective is to make students familiar with modern optimization techniques.

Second, we will see how these optimality conditions can be brought to the data and quantified. The goal is that students learn how to implement the optimal policy design problem numerically with standard softwares and how to calibrate the model such that it is consistent with empirical evidence.

Third, we will consider various recent generalizations of the workhorse model of optimal income taxation (the role of human capital, general equilibrium effects, innovation etc.). Students will then learn how these theoretical and quantitative methods have currently been used to push the research frontier. In particular, we will also consider recent successful job market papers in that field.

Fourth, we move beyond the question of income taxation and see how the just learnt methods can be used to think about commodity taxation, capital & inheritance taxation and the design of pension systems. Here the learning objective is that students learn how the methods of optimal income taxation can be generalized to study the equity-efficiency trade-off more broadly.

Course content

We study in detail the workhorse model of optimal nonlinear income taxation. How should marginal tax rates vary with incomes? We will show that the answer to that question depends less on the specific welfare function as one would assume. Instead, the distribution of abilities (i.e. an empirical object) plays a key role. We will also show how the methods of optimal nonlinear taxation can easily be used to evaluate the reforms of current real-world tax systems. The results that we derive will depend on transparent and intuitive optimality conditions that can easily be connected to the data and empirical evidence. In particular, we will introduce the concept of sufficient statistics. We show that the elasticity of taxable income is a sufficient

statistic for the welfare costs of income taxation and will discuss this concept of a sufficient statistic more broadly.

In the workhorse model of optimal income taxation, individuals only adjust their income along the intensive margin. But how do normative implications for optimal tax design change once we account for generalizations of the model? What is the role of so-called trickle-down effects? How about important long-run margins that can respond to taxation such as for example innovation? Should taxes be significantly lower once one accounts for the fact that taxes also distort the innovation margin? Next, we will study recent empirical methods that are used in the literature to estimate how these different margins (labor supply, innovation,...) respond with respect to tax reforms.

Finally, we turn to policy instruments beyond income taxes and transfers. Should commodities be taxed? Should different commodities or services be taxed at different rates? Is a luxury tax part of the optimal tax mix? How should inheritances be taxed in comparison to labor income? Finally, how can we use the sufficient-statistics methods to think about the optimal design of unemployment insurance or pension design?

Course structure and indications of the learning and teaching design

1. The workhorse model of optimal income taxation: theory

2. The workhorse model of optimal income taxation: quantitative work

3. Generalizations of the workhorse model:

- General Equilibrium Effects

- Human Capital Accumulation

- Innovation

-etc.

4. Recent Empirical Methods to estimate labor supply elasticities & elasticities of taxable income

5. Optimal design of commodity taxation, capital & inheritance taxes, pension systems and unemployment insurance

Course literature

Akcigit, U., J. Grigsby, T. Nicholas and S. Stantcheva (2021): "Taxation and Innovation in the 20thCentury". NBER Working Paper 24982.

Ales, L., M. Kurnaz, and C. Sleet (2015): "Technical change, wage inequality, and taxes," American Economic Review, 105(10), 3061-3101.

Atkinson, A., and J. Stiglitz (1976): "The Design of Tax Structure: Direct versus Indirect Taxation," Journal of Public Economics, 6(1-2), 55-75.

Castleman, B. L., and B. T. Long (2016): "Looking beyond enrollment: The causal effect of need-based grants on college access, persistence, and graduation," Journal of Labor Economics, 34(4).

Chamley, C. (1986): "Optimal taxation of capital income in general equilibrium with infinite lives," Econometrica: Journal of the Econometric Society, pp. 607-622.

Chetty, R. (2009): "Sufficient Statistics for Welfare Analysis: A Bridge Between Structural and Reduced-Form Methods," Annual Review of Economics, 1(1), 451-488.

Christiansen, V. (1984): "Which commodity taxes should supplement the income tax?," Journal of public economics, 24(2), 195-220.

Diamond, P. (1998): "Optimal Income Taxation: An Example with a U-Shaped Pattern of Optimal Marginal Tax Rates". The American Economic Review, 88(1),p-83-95.

Diamond, P. (1980): "Income Taxation with Fixed Hours of Work," Journal of Public Economics, 13(1), 101-110.

Gelber, A., T. Moore, and A. Strand (2016): "The Effect of Disability Insurance Payments on Beneficiaries' Earnings," NBER Working Paper.

Golosov, M., A. Tsyvinski, and N. Werquin (2014): "A Variational Approach to the Analysis of Tax Systems," Working Paper.

Hosseini, R. and A. Shourideh (2019): "Retirement Financing: An Optimal Reform Approach", Econometrica, 87(4), p. 1205-1265.

Jacobs, B., and R. Boadway (2014): "Optimal linear commodity taxation under optimal non-linear income taxation," Journal of Public Economics, 117, 201-210.

Judd, K. L. (1985): "Redistributive taxation in a simple perfect foresight model," Journal of public Economics, 28(1), 59-83.

Kleven, H. J. (2016): "Bunching," Annual Review of Economics, 8(1).

Kleven, H. J., and M. Waseem (2013): "Using notches to uncover optimization frictions

and structural elasticities: Theory and evidence from Pakistan," The Quarterly Journal of

Economics.

Kolsrud, J., C. Landais, P. Nilsson and J. Spinnewijn (2018): "The Optimal Timing of Unemployment Benefits: Theory and Evidence from Sweden. The American Economic Review, 108 (4-5), p. 985-1033.

Lehmann, E., L. Simula, and A. Trannoy (2014): "Tax me if you can! Optimal nonlinear income tax between competing governments," The Quarterly Journal of Economics, 129(4), 1995-2030.

Mirrlees, J. A. (1971): "An Exploration in the Theory of Optimum Income Taxation," The Review of Economic Studies, 38(2), 175-208.

Piketty, T. (1997): "La redistribution fiscale face au chomage," Revue française d'économie, 12(1), 157-201.

Piketty, T., and E. Saez (2013a): "A theory of optimal inheritance taxation," Econometrica, 81(5), 1851-1886.

Piketty, T., and E. Saez (2013b): "Optimal Labor Income Taxation," Handbook of Public Economics (5), p.391-474.

Rothschild, C., and F. Scheuer (2013): "Redistributive Taxation in the Roy Model," The Quarterly Journal of Economics, 128(2), 623-668.

Sachs, D., A. Tsyvinski, and N. Werquin (2020): "Nonlinear tax incidence and optimal taxation in general equilibrium," Econometrica, 88(2), 469-493.

Saez, E. (2001): "Using Elasticities to Derive Optimal Income Tax Rates," Review of Economic Studies, 68(1), 205-229.

Saez, E. (2002a): "The desirability of commodity taxation under non-linear income taxation and heterogeneous tastes," Journal of Public Economics, 83(2), 217-230.

Saez, E. (2002b): "Optimal Income Transfer Programs: Intensive versus Extensive Labor Supply Responses," Quarterly Journal of Economics, 117(3), 1039-1073.

Saez, E. (2010): "Do taxpayers bunch at kink points?," American Economic Journal: Economic Policy, 2(3), 180-212.

Saez, E., and S. Stantcheva (2018): "A simpler theory of optimal capital taxation," Journal of Public Economics, 162, 120-142.

Stantcheva, S. (2017): "Optimal taxation and human capital policies over the life cycle," Journal of Political Economy, 125(6), 1931-1990.

Stiglitz, J. E. (1982): "Self-Selection and Pareto Efficient Taxation," Journal of Public Economics, 17(2), 213-240.

Straub, L., and I. Werning (2020): "Positive long-run capital taxation: Chamley-Judd revisited," American Economic Review, 110(1), 86-119.

Additional course information

In the case of the President's Board having to implement new directives due to the SARS-CoV-2 pandemic in autumn semester 2021, the course information listed above will be changed as follows:

- the lectures and everything will take place as planned with the only difference that lectures and office hours will be held virtually.

Examination information

Examination sub part/s

1. Examination sub part (1/1)

Examination time and form
Decentral - examination paper written at home (individual) (100%)
Examination time: term time

Remark
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Examination-aid rule
Term papers

Written work must be written without outside help according to the known citation standards, and a declaration of authorship must be attached, which is available as a template on the StudentWeb.

Documentation (quotations, bibliography, etc.) must be carried out universally and consistently according to the requirements of the chosen/specified citation standard such as e.g. APA or MLA.

The legal standard is recommended for legal work (cf. by way of example: FORSTMOSER, P., OGOREK R., SCHINDLER B., Juristisches Arbeiten: Eine Anleitung für Studierende (the latest edition in each case), or according to the recommendations of the Law School).

The reference sources of information (paraphrases, quotations, etc.) that has been taken over literally or in the sense of the original text must be integrated into the text in accordance with the requirements of the citation standard used. Informative and bibliographical notes must be included as footnotes (recommendations and standards e.g. in METZGER, C., Lern- und Arbeitsstrategien (latest edition)).

For all written work at the University of St.Gallen, the indication of page numbers is mandatory, regardless of the standard chosen. Where page numbers are missing in sources, the precise designation must be made differently: chapter or section title, section number, article, etc.

Supplementary aids
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Examination languages
Question language: English
Answer language: English

Examination content
Content covered in class and in the lecture slides.

Examination relevant literature
Lectures slides and papers in the list above.

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Please note

Please note that only this fact sheet and the examination schedule published at the time of bidding are is binding and takes precedence over other information, such as information on StudyNet (Canvas), on lecturers' websites and information in lectures etc.

Any references and links to third-party content within the fact sheet are only of a supplementary, informative nature and lie outside the area of responsibility of the University of St.Gallen.

Documents and materials are only relevant for central examinations if they are available by the end of the lecture period (CW51) at the latest. In the case of centrally organised mid-term examinations, the documents and materials up to CW 42 are relevant for testing.

Binding nature of the fact sheets:

- Course information as well as examination date (organised centrally/decentrally) and form of examination: from bidding start in CW 34 (Thursday, 26 August 2021);
- Examination information (regulations on aids, examination contents, examination literature) for decentralised examinations: in CW 42 (Monday, 18 October 2021);
- Examination information (regulations on aids, examination contents, examination literature) for centrally organised mid-term examinations: in CW 42 (Monday, 18 October 2021);

Examination information (regulations on aids, examination contents, examination literature) for centrally organised examinations: two weeks before the end of the registration period in CW 45 (Monday, 8 November 2021).