

# Public Economics: Syllabus FS 2024

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Language English

ECTS 3

Time / Place This course takes place during the first half of spring semester. We will meet on **Tuesdays, 08:15-10:00** and on **Thursdays, 10:15-12:00**, in Room **JBH HG S14**.

Textbooks Tresch, R. "Public Finance", 4th Ed. Academic Press, 2023. (ADAM)  
Kaplow, L. "The Theory of Taxation and Public Economics". Princeton Univ. Press, 2008. (ADAM)

Exam April 2024

Office hours By appointment

(Syllabus version: 26.02.2024)

## Course outline and Reading List

Readings: \*marks required material; all others are recommended only. Required reading and text chapters are listed first, followed by additional material. The reading list also serves as a bibliography for the papers cited in the slides.

### **Lecture 1 Introduction: Expenditure theory (ALL)**

(27. February)

\*Tresch (2023), Chapter 1 (without "Government sector in US")

Tresch (2023), Chapters 2-5

### **Lecture 2 Regulation of externalities (JR)**

(29. February)

Tresch (2023), Chapter 8

Colmer, J., Martin, R., Muûls, M. & Wagner, U. J. (2023) Does Pricing Carbon Mitigate Climate Change? Firm-Level Evidence from the European Union Emissions Trading Scheme.

Feindt, S., Kornek, U., Labeaga, J. M., Sterner, T., & Ward, H. (2021). Understanding regressivity: Challenges and opportunities of European carbon pricing. *Energy Economics*, 103, 105550.

- Fowlie, M., Holland, S. P., & Mansur, E. T. (2012). What do Emissions Markets deliver and to whom? Evidence from Southern California's NOx Trading Program. *American Economic Review*, 102(2), 965-993.
- Fowlie, M., & Perloff, J. M. (2013). Distributing pollution rights in cap-and-trade programs: are outcomes independent of allocation?. *Review of Economics and Statistics*, 95(5), 1640-1652.
- Grainger, C., & Ruangmas, T. (2018). Who wins from emissions trading? Evidence from California. *Environmental and Resource Economics*, 71(3), 703-727.
- Stavins, R. N. (1998). What can we learn from the grand policy experiment? Lessons from SO2 allowance trading. *The Journal of Economic Perspectives*, 69-88.
- Weitzman, M. L. (1974). Prices vs. Quantities. *The Review of Economic Studies*, 41(4), 477-491.

### **Lecture 3      The EU Emissions Trading System (LS)**

(5. March)

- \*Ellerman, A. D., Marcantonini, C., & Zaklan, A. (2016). The European Union Emissions Trading System: Ten Years and Counting. *Review of Environmental Economics and Policy*, 10(1), 89-107.
- Bayer, P., & Aklin, M. (2020). The European Union emissions trading system reduced CO2 emissions despite low prices. *Proceedings of the National Academy of Sciences*, 117(16), 8804-8812.
- Drupp, M. A., Nesje, F. & Schmidt, R. (2022). Pricing Carbon. *Mimeo*, available on ADAM.
- Greenstone, M., Kopits, E., & Wolverton, A. (2013). Developing a social cost of carbon for US regulatory analysis: A methodology and interpretation. *Review of Environmental Economics and Policy*, 7(1), 23-46.
- Hintermann, B., Peterson, S., & Rickels, W. (2016). Price and Market Behavior in Phase II of the EU ETS: A Review of the Literature. *Review of Environmental Economics and Policy*, 10(1), 108-128.
- Hintermann, B. (2019). CO2-Reduktionen in der Schweiz dank der EU. *NZZ*, 5.2.2019.
- Nordhaus, W. D. (2017). Revisiting the social cost of carbon. *Proceedings of the National Academy of Sciences*, 114(7), 1518-1523.
- Perino, G. (2018). New EU ETS Phase 4 rules temporarily puncture waterbed. *Nature Climate Change Vol. 20B*, April 2018: 262-64.

### **Lecture 4      Firm-level effects of climate policy (LS)**

(7. March)

- \*Martin, R., Muûls, M., & Wagner, U. J. (2016). The Impact of the European Union Emissions Trading Scheme on Regulated Firms: What is the Evidence after Ten Years?. *Review of Environmental Economics and Policy*, 10(1), 129-148.
- Bushnell, J. B., Chong, H., & Mansur, E. T. (2013). Profiting from regulation: Evidence from the European carbon market. *American Economic Journal: Economic Policy*, 5(4), 78-106.
- Calel, R. (2020). Adopt or innovate: Understanding technological responses to cap-and-trade. *American Economic Journal: Economic Policy*, 12(3), 170-201.

- Colmer, J., Martin, R., Muûls, M., & Wagner, U. J. (2023). Does pricing carbon mitigate climate change? Firm-level evidence from the European Union emissions trading scheme.
- Ellerman, A. D., & Montero, J. P. (2007). The efficiency and robustness of allowance banking in the US Acid Rain Program. *The Energy Journal*, 47-71.
- Fabra, N., & Reguant, M. (2014). Pass-through of emissions costs in electricity markets. *The American Economic Review*, 104(9), 2872-2899.
- Fell, H., Hintermann, B., & Vollebergh, H. (2015). Carbon content of electricity futures in Phase II of the EU ETS. *The energy journal*, 36(4), 61-83.
- Ganapati, S., Shapiro, J. S., & Walker, R. (2020). Energy cost pass-through in US manufacturing: Estimates and implications for carbon taxes. *American Economic Journal: Applied Economics*, 12(2), 303-42.
- Hahn, R. W. (1984). Market Power and Transferable Property Rights. *Quarterly Journal of Economics*, 99(4), 753-765.
- Hintermann, B. (2016). Pass-through of CO2 Emission Costs to Hourly Electricity Prices in Germany. *Journal of the Association of Environmental and Resource Economists*, 3(4), 857-891.
- Hintermann, B. (2016). Emissions Trading and Market Manipulation. In: S. Weishaar and E. Woerdman (Eds), *Research Handbook on Emissions Trading*, Chapter 5 in Part 2. Cheltenham: Edward Elgar (available on ADAM).
- Hintermann, B. (2017). Market Power in Emission Permit Markets: Theory and Evidence from the EU ETS. *Environmental and Resource Economics*, 66(1), 89-112.
- Liski, M., & Montero, J.-P. (2011). Market Power in an Exhaustible Resource Market: The Case of Storable Pollution Permits. *Economic Journal*, 121 (March), 166-144.
- Löschel, A., Lutz, B. J., & Managi, S. (2019). The impacts of the EU ETS on efficiency and economic performance—An empirical analyses for German manufacturing firms. *Resource and Energy Economics*, 56, 71-95.
- Marin, G., Marino, M., & Pellegrin, C. (2018). The impact of the European Emission Trading Scheme on multiple measures of economic performance. *Environmental and Resource Economics*, 71, 551-582.
- Misiolek, W. S., & Elder, H. W. (1989). Exclusionary manipulation of markets for pollution rights. *Journal of Environmental Economics and Management*, 16(2), 156-166.
- Montero, J. P. (2009). Market power in pollution permit markets. *The Energy Journal*, 115-142.
- Oberndorfer, U. (2009). EU emission allowances and the stock market: evidence from the electricity industry. *Ecological Economics*, 68(4), 1116-1126.
- Salop, S. C., & Scheffman, D. T. (1983). Raising rivals' costs. *The American Economic Review*, 73(2), 267-271.
- Sijm, J. P. M., Hers, J. S., Lise, W., & Wetzelaer, B. J. H. W. (2008). The impact of the EU ETS on electricity prices. Final report to DG Environment of the European Commission (No. ECN-E--08-007). Energy research Centre of the Netherlands ECN.
- Zachmann, G., & Von Hirschhausen, C. (2008). First evidence of asymmetric cost pass-through of EU emissions allowances: Examining wholesale electricity prices in Germany. *Economics Letters*, 99(3), 465-469.

**Lecture 5 Externalities in Transportation (BS)**

(12. March)

\*Davis, L. W. (2017). Saturday Driving Restrictions Fail to Improve Air Quality in Mexico City. *Scientific Reports* 7, 41652.

Anderson, M. L. (2014). Subways, strikes, and slowdowns: The impacts of public transit on traffic congestion. *The American Economic Review*, 104(9), 2763-2796.

Anderson, M. L., & Auffhammer, M. (2014). Pounds that kill: The external costs of vehicle weight. *Review of Economic Studies*, 81(2), 535-571.

ARE (2016). Externe Kosten und Nutzen des Verkehrs in der Schweiz. Strassen-, Schienen-, Luft- und Schiffsverkehr 2010 bis 2013. Bundesamt für Raumentwicklung.

Bento, A., Kaffine, D., Roth, K., & Zaragoza-Watkins, M. (2014). The effects of regulation in the presence of multiple unpriced externalities: Evidence from the transportation sector. *American Economic Journal: Economic Policy*, 6(3), 1-29.

Börjesson, M., & Kristoffersson, I. (2018). The Swedish congestion charges: Ten years on. *Transportation Research Part A: Policy and Practice*, 107, 35-51.

CE Delft (2019). Handbook on the external costs of transport, version 2019 (No. 18.4 K83. 131).

Ettema, D., Knockaert, J., & Verhoef, E. (2010). Using incentives as traffic management tool: empirical results of the "peak avoidance" experiment. *Transportation Letters*, 2(1), 39-51.

Götschi, T. & Hintermann, B. (2014). Götschi, T., & Hintermann, B. (2014). Valuing public investments to support bicycling. *Swiss journal of economics and statistics*, 150(4), 297-329.

Götschi, T., Garrard, J., & Giles-Corti, B. (2016). Cycling as a part of daily life: a review of health perspectives. *Transport Reviews* 36(1), 45-71.

Hintermann, B., Molloy, J., Schoeman, B., Götschi, T., Castro, A., Tchervenkov, C., Tomic, U. and Axhausen, K. (2021). Pigovian Transport Pricing in Practice. *WWZ Working Paper* 2021/11, Faculty of Business and Economics, University of Basel.

Lalive, R., Luechinger, S., & Schmutzler, A. (2017). Does expanding regional train service reduce air pollution?. *Journal of Environmental Economics and Management*.

Mueller, N., Rojas-Rueda, D., Cole-Hunter, T., de Nazelle, A., Dons, E., Gerike, R., ... & Nieuwenhuijsen, M. (2015). Health impact assessment of active transportation: a systematic review. *Preventive medicine* 76, 103-114.

Nielsen, O. A. (2004). Behavioral responses to road pricing schemes: Description of the Danish AKTA experiment. In *Intelligent Transportation Systems* 8(4), 233-251

Parry, I. W., Heine, M. D., Lis, E., & Li, S. (2014). *Getting energy prices right: From principle to practice*. International Monetary Fund.

**Lecture 6 Natural monopolies (BS)**

(14. March)

\*Tresch (2023), Chapter 9: Decreasing cost production

Joskow, P. L. (2007). Regulation of natural monopoly. *Handbook of Law and Economics*, 2, 1227-1348.

**Lecture 7 Optimal Taxation (JR)**

(19. March)

\*Tresch (2023), Chapters 13

Tresch (2023), Chapter 12

Tresch (2023), Chapter 15

\*Kaplow (2008), Chapter 4

Kaplow (2008), Chapters 2, 3 and 6

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

Auerbach, A., & Hines Jr., J. (2002). Taxation and Economic Efficiency. *Handbook of Public Economics* 3, Ch. 10.

Besley, T., & Jewitt, I. (1995). Uniform Taxation and Consumer Preferences. *Journal of Public Economics*, 58(1), 73-84.

Boadway, R. (1975). Cost-benefit Rules in General Equilibrium, *Review of Economic Studies*, 42(131), 361-374.

Boadway, R., Marchand, M., & Pestieau, P. (1994). Towards a Theory of the Direct-Indirect Tax Mix. *Journal of Public Economics*, 55(1), 71-88.

Coate, S. (2000). An Efficiency Approach to the Evaluation of Policy Changes. *Economic Journal*, 110(April), 437-455.

Cortlett, W., & Hague, D. (1953-1954): Complementarity and the Excess Burden of Taxation. *Review of Economic Studies*, 21(1), 21-30.

Dahan, M., & Strawczynski, M. (2000). Optimal Income Taxation: An Example With a U-Shaped Pattern of Optimal Marginal Tax Rates: Comment. *American Economic Review*, 90(3), 681-686.

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

Diamond, P. A. & Mirrlees, J. A. (1971a). Optimal Taxation and Public Production I: Production Efficiency. *American Economic Review*, 61(1), 8-27.

Diamond, P. A., & Mirrlees, J. A. (1971b). Optimal Taxation and Public Production II: Tax Rules. *American Economic Review*, 61(3), 261-278.

Farhi, E. & Gabaix, X. (2020) Optimal Taxation with Behavioral Agents. *American Economic Review*, 110(1), 298-336.

Feldstein, M. (1972). Distributional Equity and the Optimal Structure of Public Prices. *American Economic Review*, 62(1), 32-36.

Feldstein, M. (1995). The Effect of Marginal Tax Rates on Taxable Income: A Panel Study of the 1986 Tax Reform Act. *Journal of Political Economy* 103(3), 551-572.

Green, J. (1975). Two Models of Optimal Pricing and Taxation. *Oxford Economic Papers*, 27(3), 352-382.

Gruber, J., & Saez, E. (2002). The elasticity of taxable income: Evidence and implications. *Journal of Public Economics*, 84(1), 1-32.

Guesnerie, R. (1979). Financing Public Goods With Commodity Taxes: A Tax Reform Viewpoint. *Econometrica* 47(2), 393-421.

Harberger, A. (1964a). Taxation, resource allocation, and welfare. In *The role of direct and indirect taxes in the Federal Reserve System* (pp. 25-80). Princeton University Press.

Harberger, A. C. (1964b). The measurement of waste. *The American Economic Review*, 58-76.

- Hoff, K., & Lyon, A. (1995). Non-Leaky Buckets: Optimal Redistributive Taxation and Agency Costs. *Journal of Public Economics*, 58(3), 365-390.
- Hotelling, H. (1938). The general welfare in relation to problems of taxation and of railway and utility rates. *Econometrica: Journal of the Econometric Society*, 242-269.
- Kanbur, R., Keen, M., & Tuomala, M. (1994). Optimal non-Linear Income Taxation for the Alleviation of Income-Poverty. *European Economic Review*, 38(8), 1613-1632.
- Kaplow, L. (2006). On the Undesirability of Commodity Taxation Even When Income Taxation is not Optimal. *Journal of Public Economics*, 90(6), 1235-1250.
- Mirrlees, J. (1971). An Exploration in the Theory of Optimum Income Taxation. *Review of Economic Studies*, 38(114), 175-208.
- Ramsey, F. P. (1927). A Contribution to the Theory of Taxation. *The Economic Journal*, 37(145), 47-61.
- Saez, E. (2001). Using Elasticities to Derive Optimal Income Tax Rates. *Review of Economic Studies*, 68(1), 205-229.
- Saez, E. (2004). Direct or Indirect Tax Instruments for Redistribution: Short-run versus Long-run. *Journal of Public Economics* 88, (3/4), 503-518.
- Sah, R. K. (1983). How much Redistribution is Possible through Commodity Taxes? *Journal of Public Economics*, 20(1), 89-101.
- Slemrod, J., Yitzhaki, S., Mayshar, J., & Lundholm, M. (1994). The Optimal Two-Bracket Linear Income Tax. *Journal of Public Economics*, 53(2), 269-290.
- Stern, N. (1976). On the Specification of Models of Optimum Income Taxation. *Journal of Public Economics*, 6(1-2), 123-162.
- Stiglitz, J. (1987). Pareto Efficient and Optimal Taxation and the New New Welfare Economics. *Handbook of Public Economics* 2, Ch. 15.
- Stiglitz, J., & Dasgupta, P. (1971). Differential Taxation, Public Goods, and Economic Efficiency. *Review of Economic Studies*, 38(114), 151-174.
- Tuomala, M. (1990). *Optimal Income Tax and Redistribution*. Oxford: Oxford University Press.

## **Lecture 8 Optimal taxation continued (JR)**

(21. March)

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

See others in Lecture 7

## **Lecture 9 Externalities in second-best (JR)**

(26. March)

- \*Jacobs, B. (2018). The marginal cost of public funds is one at the optimal tax system. *International Tax and Public Finance*, 1-30.
- Kaplow (2008), Chapter 8

- Boadway, R. (2010). Efficiency and Redistribution: An Evaluative Review of Louis Kaplow's "The Theory of Taxation and Public Economics". *Journal of Economic Literature*, 48(4), 964-979.
- Bovenberg, L., & de Mooij, R. (1994). Environmental Levies and Distortionary Taxation. *American Economic Review*, 84(4), 1085-1089.
- Bovenberg, L., & Goulder, L. (1996). Optimal Environmental Taxation in the Presence of Other Taxes: General-Equilibrium Analyses. *American Economic Review*, 86(4), 985-1000.
- Diamond, P. A. (1975). A many-person Ramsey tax rule. *Journal of Public Economics*, 4(4), 335-342.
- Goulder, L. (1995). Environmental Taxation and the Double Dividend: A Reader's Guide. *International Tax and Public Finance*, 2, 157-183.
- Fullerton, D. (1997). Environmental Levies and Distortionary Taxation: Comment. *American Economic Review*, 87(1), 245-251.
- Jacobs, B., & De Mooij, R. A. (2015). Pigou meets Mirrlees: On the irrelevance of tax distortions for the second-best Pigouvian tax. *Journal of Environmental Economics and Management*, 71, 90-108.
- Jacobs, B., & Boadway, R. (2014). Optimal linear commodity taxation under optimal non-linear income taxation. *Journal of Public Economics*, 117, 201-210.
- Kaplow, L. (2012). Optimal Control of Externalities in the Presence of Income Taxation. *International Economic Review*, 52(2), 487-509.
- Metcalf, G. (1999). A Distributional Analysis of Green Tax Reform. *National Tax Journal*, 52(4), 655-681.
- Parry, I. (1995). Pollution Taxes and Revenue Recycling. *Journal of Environmental Economics and Management*, 29(3), S64-S77.
- Parry, I., & Bento, A. (2000). Tax Deductions, Environmental Policy, and the 'Double Dividend' Hypothesis. *Journal of Environmental Economics and Management*, 39 (1), 67-96.
- Schöb, R. (2003): The Double Dividend Hypothesis of Environmental Taxes: A Survey, *CESifo Working Paper Series* No. 946.

## Lecture 10 Behavioral responses to taxation (LP)

(2. April)

- \*Saez, E., Slemrod, J., & Giertz, S. H. (2012). The Elasticity of Taxable Income With Respect to Marginal Tax Rates: A Critical Review. *Journal of Economic Literature*, 50(1), 3-50.
- Auten, G., & Carroll, R. (1999). The Effect of Income Taxes on Household Income. *Review of Economics and Statistics*, 81(4), 681-693.
- Blau, F. D., & Kahn, L. M. (2007). Changes in the labor supply behavior of married women: 1980–2000. *Journal of Labor Economics*, 25(3), 393-438.
- Blundell, R., & MaCurdy, T. (1999). Labor Supply: A Review of Alternative Approaches. *Handbook of Labor Economics*, 3, 1559-1695.
- Chetty, R. (2009). Sufficient Statistics for Welfare Analysis: A Bridge Between Structural and Reduced-Form Methods. *Annu. Rev. Econ.*, 1(1), 451-488.
- Chetty, R. (2009). Is the Taxable Income Elasticity Sufficient to Calculate Deadweight Loss? The Implications of Evasion and Avoidance. *American Economic Journal: Economic Policy*, 1(2), 31-52.

- Chetty, R., Friedman, J. N., & Saez, E. (2013). Using Differences in Knowledge across Neighborhoods to Uncover the Impacts of the EITC on Earnings. *The American Economic Review*, 103(7), 2683-2721.
- Feldstein, M. (1995). The Effect of Marginal Tax Rates on Taxable Income: a Panel Study of the 1986 Tax Reform Act. *Journal of Political Economy*, 103(3), 551-572.
- Feldstein, M. (1999). Tax avoidance and the deadweight loss of the income tax. *Review of Economics and Statistics*, 81(4), 674-680.
- Gorodnichenko, Y., Martinez-Vazquez, J., & Sabirianova Peter, K. (2009). Myth and Reality of Flat Tax Reform: Micro Estimates of Tax Evasion Response and Welfare Effects in Russia. *Journal of Political Economy*, 117(3), 504-554.
- Gruber, J., & Saez, E. (2002). The Elasticity of Taxable Income: Evidence and Implications. *Journal of Public Economics*, 84(1), 1-32.
- Hausman, J. A. (1985). Taxes and Labor Supply. *Handbook of Public Economics*, 1, 213-263.
- Imbens, G. W., Rubin, D. B., & Sacerdote, B. I. (2001). Estimating the Effect of Unearned Income on Labor Earnings, Savings, and Consumption: Evidence from a Survey of Lottery Players. *American Economic Review*, 778-794.
- Kleven, H. J., Landais, C., & Saez, E. (2013). Taxation and International Migration of Superstars: Evidence from the European Football Market. *The American Economic Review*, 103(5), 1892-1924.
- Kleven, H. J. (2016). Bunching. *Annual Review of Economics*, 8, 435-464.
- Pencavel, J. (1986). Labor Supply of Men: a Survey. *Handbook of Labor Economics*, 1, 3-102.
- Piketty, T., Saez, E., & Stantcheva, S. (2014). Optimal Taxation of Top Labor Incomes: A Tale of Three Elasticities. *American Economic Journal: Economic Policy*, 6(1), 230-271.

## Lecture 11    Newest approaches to behavioral tax policy (LP)

(4. April)

- \*Blomquist, S., Newey, W. K., Kumar, A., & Liang, C. Y. (2021). On bunching and identification of the taxable income elasticity. *Journal of Political Economy*, 129(8), 2320-2343.
- \*Zheng, S., Trott, A., Srinivasa, S., Parkes, D. C., & Socher, R. (2022). The AI Economist: Taxation policy design via two-level deep multiagent reinforcement learning. *Science advances*, 8(18), eabk2607.
- Alinaghi, N., Creedy, J., & Gemmell, N. (2021). Elasticities of taxable income and adjustment costs: bunching evidence from New Zealand. *Oxford Economic Papers*, 73(3), 1244-1269.
- Chetty, R., Friedman, J. N., Olsen, T., & Pistaferri, L. (2011). Adjustment Costs, Firm Responses, and Micro vs. Macro Labor Supply Elasticities: Evidence from Danish Tax Records. *The Quarterly Journal of Economics*, 126(2), 749-804.
- Chetty, R. (2012). Bounds on Elasticities With Optimization Frictions: A Synthesis of Micro and Macro Evidence on Labor Supply. *Econometrica*, 80(3), 969-1018.
- Kleven, H. J., & Waseem, M. (2013). Using Notches to Uncover Optimization Frictions and Structural Elasticities: Theory and Evidence from Pakistan. *The Quarterly Journal of Economics*, 128(2), 669-723.
- Kleven, H. J., & Schultz, E. A. (2014). Estimating Taxable Income Responses Using Danish Tax Reforms. *American Economic Journal: Economic Policy*, 6(4), 271-301.



Saez, E. (2010). Do Taxpayers Bunch at Kink Points?. *American Economic Journal: Economic Policy*, 2(3), 180-212.

April 9: Answering of questions that were posed by e-mail by April 7, 2024

April 11: Exam