

Public Economics: Syllabus FS 2023

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| <u>Instructor</u> | Prof. Beat Hintermann b.hintermann@unibas.ch +41 61 207 3339 |
| <u>Assistance</u> | Jakob Roth jakob.roth@unibas.ch |
| <u>Language</u> | English |
| <u>ECTS</u> | 3 |
| <u>Time / Place</u> | 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 . In the second half of the semester, Prof. Schmidheiny will teach his course “Fiscal Federalism” during the same lecture slots. |
| <u>Textbooks</u> | Tresch, R. “Public Finance”, 3rd Ed. Amsterdam: Academic Press, 2015. (ADAM) Kaplow, L. “The Theory of Taxation and Public Economics”. Princeton Univ. Press, 2008. (ADAM) |
| <u>Homework</u> | Two graded homework assignments, counting for 15% each of the total points, Homework 1: Assigned on xx, due on xx Tutorial 1: Homework 2: Assigned on 28.3., due on 4.4. 2023 Tutorial 2: |
| <u>Exam</u> | 13. April 2023, counting for remaining 70% |
| <u>Office hours</u> | By appointment |

(Syllabus version: 12. January 2023)

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**

(21. February)

*Tresch (2015), Chapter 1 (without “Government sector in US”)

Tresch (2015), Chapters 2-5

Lecture 2 Regulation of externalities

(23. February)

*Tresch (2015), Chapter 8

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

(7. 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

(9. 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. (2022). Does pricing carbon mitigate climate change? Firm-level evidence from the European Union emissions trading scheme. CEPR Discussion Paper No. DP16982.
- 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.
- 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

(14. 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

(16. March)

*Tresch (2015), Chapter 9: Decreasing cost production

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

Lecture 7 **Deadweight loss of taxation**

(21. March)

*Tresch (2015), Chapters 13

Tresch (2015), Chapter 12

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.

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.

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

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

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.

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.

Kaplow, L. (2006). On the Undesirability of Commodity Taxation Even When Income Taxation is not Optimal. *Journal of Public Economics*, 90(6), 1235-1250.

Ramsey, F. P. (1927). A Contribution to the Theory of Taxation. *The Economic Journal*, 37(145), 47-61.

Sah, R. K. (1983). How much Redistribution is Possible through Commodity Taxes? *Journal of Public Economics*, 20(1), 89-101.

Stiglitz, J., & Dasgupta, P. (1971). Differential Taxation, Public Goods, and Economic Efficiency. *Review of Economic Studies*, 38(114), 151-174.

Lecture 8 Optimal income taxation

(23. March)

*Kaplow (2008), Chapter 4

Tresch (2002), Chapter 15

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.

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.

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

Hoff, K., & Lyon, A. (1995). Non-Leaky Buckets: Optimal Redistributive Taxation and Agency Costs. *Journal of Public Economics*, 58(3), 365-390.

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.

Mirrlees, J. (1971). An Exploration in the Theory of Optimum Income Taxation. *Review of Economic Studies*, 38(114), 175-208.

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.

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 Welfare Economics. *Handbook of Public Economics* 2, Ch. 15.

Tuomala, M. (1990). Optimal Income Tax and Redistribution. Oxford: Oxford University Press.

Lecture 9 Externalities in second-best

(28. 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

(30. March)

- *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 Nonparametric estimation of TI response

(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.
- 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.

Lecture 12 TBD.

(1. April)