

# Graduate Public Economics: Government Expenditures

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November 2025

Note: This syllabus is designed for a 15-week (semester-length) three-credit graduate course.

## Course Description

This is a graduate course in public economics intended for Ph.D. students. Master's students with previous coursework equivalent to a Ph.D. first-year microeconomics and econometrics are also welcome. The course consists of four parts.

- Part 1: Rationale and impacts of social protection programs, including social insurance and transfer programs
- Part 2: Why do governments do what they do: identification and determinants of social welfare function
- Part 3: Place-based policies and fiscal federalism
- Part 4: How to produce policy-relevant empirical research

In part 1, we will first learn how to model the social protection programs. We will then learn empirical frameworks to simplify the models to a few parameters that could be estimated in empirical settings. We will then apply the empirical framework to programs in high, middle, and low-income countries. The public economics literature has long studied the government programs in high-income countries. More recently, greater attention and effort have been devoted to understanding social protection programs in middle- and low-income countries. It is an exciting field to delve into, and by learning about programs in high-, middle-, and low-income countries together, we will have a better grasp of how to model public policies in countries where governments face different information and enforcement constraints.

In part 2, we zoom in on an object that is assumed to be given in part 1: social welfare functions. We will dive into recent literature on understanding social preferences, including reverse-engineering from policy implementation and directly eliciting taxpayers' preferences through surveys and community discussions. We will then learn how the composition of voters, the identity of politicians, and the type of political regime determine social welfare functions.

Part 3 studies local governments' expenditures and the problem of allocating government resources not across individuals, but across places.

This course aims to help you be a good consumer and producer of research. To this end, in part 4, we will learn the life cycle of (policy-relevant) research, from writing a pre-analysis plan, interpreting estimates, aggregating estimates from multiple studies, to finally asking the

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question: Does the research matter in policy-making? The lectures in this part will be scattered throughout the semester, so that you can apply what you learned from this part in your assignment.

**Acknowledgments:** I thank Professor Raj Chetty, Professor Amy Finkelstein, Professor Stefanie Stantcheva, and Professor Owen Zidar for making their teaching materials publicly available on their websites, and IGC and BREAD for making their social protection course materials accessible online. The structure and content of this course have benefited greatly from these sources.

## Course Objective

By the end of this course, you should be able to evaluate whether a policy proposal effectively achieves a specific policy goal when consulted by a policy-maker by conducting the following tasks.

- Write down a simple economic model to analyze the policy proposal.
- Derive the key target parameters from the model that determines policy effectiveness.
- Design a research project to estimate the target parameters.

## Useful Materials

There are no required textbooks for this course. But the following publicly available materials may be useful to you.

- Professor Raj Chetty's Public Economics materials. [Link here](#)
- Professor Amy Finkelstein's Public Economics materials. [Link here](#)
- Professor Stefanie Stantcheva's Public Economics materials. [Link here](#)
- Professor Owen Zidar's Public Economics materials. [Link here](#)
- BREAD-IGC virtual PhD course on social protection. [Link here](#)
- BITSS pre-analysis plan resource page. [Link here](#)

## Course Requirements

1. Two problem sets. One on sufficient statistics. One on the marginal value of public funds (MVPF).
2. Weekly responses. Each week (except the weeks focusing on methods), you must read the required paper and submit a half-page document that contains: 1-2 concerns you have about methods or discussions in the paper.
3. A pre-analysis plan. You have to develop a pre-analysis plan that includes research questions, proposed data collection methods, and proposed empirical methods.

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4. A final exam.

Your grade will be 30% problem sets, 20% weekly responses, 30% pre-analysis plan, and 20% final exam.

## Lecture Schedules

Papers with asterisks are for weekly responses.

### Week 1: Job loss in high-income countries

Guiding questions and learning goals:

- *Why does the government provide unemployment insurance?*  
Understand how private information and adverse selection could make private insurance unprofitable (Hendren, 2017).
- *What is the optimal amount of benefits of unemployment insurance?*  
Understand how we can simplify a model to a few welfare-relevant *sufficient statistics* that can be estimated without too many assumptions, by deriving the Baily-Chetty formula (Chetty, 2006).

Readings:

1. Hendren, N. (2017). Knowledge of future job loss and implications for unemployment insurance. *American Economic Review*, 107(7):1778–1823
2. Chetty, R. and Finkelstein, A. (2013). Chapter 3 - social insurance: Connecting theory to data. In Auerbach, A. J., Chetty, R., Feldstein, M., and Saez, E., editors, *handbook of public economics*, vol. 5, volume 5 of *Handbook of Public Economics*, pages 111–193. Elsevier
3. Chetty, R. (2006). A general formula for the optimal level of social insurance. *Journal of Public Economics*, 90(10):1879–1901
4. \*Landaís, C. and Spinnewijn, J. (2021). The value of unemployment insurance. *The Review of Economic Studies*, 88(6):3041–3085

### Week 2: Job loss in middle-and-low income countries

Guiding questions and learning goals:

- *What if people can work in places where governments cannot observe?*  
Extend the Baily–Chetty framework to settings with informal employment
- *What if the government does not observe employment status at all?*  
Understand how workfare programs provide insurance value and impact local labor markets in India (Imbert and Papp, 2015).

Readings:

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1. Gerard, F. and Gonzaga, G. (2021). Informal labor and the efficiency cost of social programs: Evidence from unemployment insurance in Brazil. *American Economic Journal: Economic Policy*, 13(3):167–206
  2. Besley, T. and Coate, S. (1992). Workfare versus welfare: Incentive arguments for work requirements in poverty-alleviation programs. *The American Economic Review*, 82(1):249–261
  3. Imbert, C. and Papp, J. (2015). Labor market effects of social programs: Evidence from India's employment guarantee. *American Economic Journal: Applied Economics*, 7(2):233–63
  4. \*Zimmermann, L. V. (2024). Why guarantee employment? evidence from a large Indian public-works program. *Economic Development and Cultural Change*, 72(4):2031–2067

### Week 3: Loss of ability to work in the long-term

Guiding questions and learning goals:

- *What screening criteria should the governments use when they only observe an imperfect signal of the ability to work?*  
Understand how *screening* mechanisms work theoretically (Diamond and Sheshinski, 1995; Golosov and Tsyvinski, 2006) and empirically by paying specific attention to nonhealth targeting criteria (Deshpande and Lockwood, 2022).

Readings:

1. Diamond, P. and Sheshinski, E. (1995). Economic aspects of optimal disability benefits. *Journal of Public Economics*, 57(1):1–23
2. Golosov, M. and Tsyvinski, A. (2006). Designing optimal disability insurance: A case for asset testing. *Journal of Political Economy*, 114(2):257–279
3. Autor, D., Kostøl, A., Mogstad, M., and Setzler, B. (2019). Disability benefits, consumption insurance, and household labor supply. *American Economic Review*, 109(7):2613–54
4. Deshpande, M. and Lockwood, L. M. (2022). Beyond health: Nonhealth risk and the value of disability insurance. *Econometrica*, 90(4):1781–1810
5. \*Dahl, G. B., Kostøl, A. R., and Mogstad, M. (2014). Family welfare cultures. *The Quarterly Journal of Economics*, 129(4):1711–1752

### Week 4: Producing empirical research I: before we access the data

Problem set 1 on sufficient statistics is due.

Guiding questions and learning objectives:

- *I have a project idea, how should I plan the research process?*  
Understand why it is a good idea to tie our own hands with a pre-analysis plan (Huntington-Klein et al., 2025; Olken, 2015) and know how to write a useful one to ensure we have sufficient statistical power, given our prior beliefs about the policy impacts.

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Readings:

1. Forming prior  
DellaVigna, S. and Vivalti, E. (2025). Forecasting social science: Evidence from 100 projects. Working Paper 34493, National Bureau of Economic Research
2. Writing pre-analysis plan  
Olken, B. A. (2015). Promises and perils of pre-analysis plans. *Journal of Economic Perspectives*, 29(3):61–80
3. Calculating power  
McKenzie, D. (2025). Designing and analysing powerful experiments: practical tips for applied researchers. *Fiscal Studies*, 46(3):305–322
4. Multiple outcomes  
Anderson, M. L. and Magruder, J. (2022). Highly powered analysis plans. Working Paper 29843, National Bureau of Economic Research
5. Research freedom  
Huntington-Klein, N., Portner, C. C., McCarthy, I., and on Researcher Variation, T. M. E. C. (2025). The sources of researcher variation in economics. Working Paper 33729, National Bureau of Economic Research

## Week 5: Empirical welfare analysis

Guiding questions and learning goals:

- *How do we calculate social welfare?*  
Construct social welfare functions to have a metric to compare social welfare under different policy scenarios (Saez and Stantcheva, 2016).
- *How do we compare the net benefits across social programs?*  
Derive the marginal value of public funds (MVPF) formula and compare it to classic approaches, including Marginal Excess Burden and Marginal Cost of Public Funds (Finkelstein and Hendren, 2020).

Readings:

1. Kaplow, L. (1995). A fundamental objection to tax equity norms: A call for utilitarianism. *National Tax Journal*, 48(4):497–514
2. Saez, E. and Stantcheva, S. (2016). Generalized social marginal welfare weights for optimal tax theory. *American Economic Review*, 106(1):24–45
3. Finkelstein, A. and Hendren, N. (2020). Welfare analysis meets causal inference. *Journal of Economic Perspectives*, 34(4):146–67
4. Hendren, N. and Sprung-Keyser, B. (2020). A unified welfare analysis of government policies\*. *The Quarterly Journal of Economics*, 135(3):1209–1318

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## Week 6: Identifying program beneficiaries

Guiding questions and learning goals:

- *Should the government give everyone cash?*  
Analyze the trade-off between Universal Basic Income (UBI) and targeted cash transfer programs by applying the social welfare function we learned in week 5 to the two types of programs.
- How to target program beneficiaries?  
Understand the appeals of proxy-means-testing, community targeting, and self-targeting theoretically, and know which appeals hold empirically.

Readings:

1. Hanna, R. and Olken, B. A. (2018). Universal basic incomes versus targeted transfers: Anti-poverty programs in developing countries. *Journal of Economic Perspectives*, 32(4):201–26
2. Finkelstein, A. and Notowidigdo, M. J. (2019). Take-up and targeting: Experimental evidence from snap\*. *The Quarterly Journal of Economics*, 134(3):1505–1556
3. Alatas, V., Banerjee, A., Hanna, R., Olken, B. A., and Tobias, J. (2012). Targeting the poor: Evidence from a field experiment in indonesia. *American Economic Review*, 102(4):1206–40
4. Alatas, V., Banerjee, A., Hanna, R., Olken, B. A., Purnamasari, R., and Wai-Poi, M. (2016). Self-targeting: Evidence from a field experiment in indonesia. *Journal of Political Economy*, 124(2):371–427
5. \*Haushofer, J., Niehaus, P., Paramo, C., Miguel, E., and Walker, M. (2025). Targeting impact versus deprivation. *American Economic Review*, 115(6):1936–74

## Week 7: Producing research II: interpreting and diffusing the results; Giving people cash

Guiding questions and learning goals:

- *How informative are the estimates?*  
Understand why null results are informative.(Abadie, 2020).
- *How do we aggregate estimates across studies?*  
Understand Bayesian hierarchical models.
- *Does giving people cash make them work less?*  
Know the general lessons from numerous cash transfer programs, which are derived from the Bayesian hierarchical models.
- *Does research change policymakers' beliefs?*  
Discuss the gap between policymakers' beliefs and evidence (if any), and what we as researchers can do about it.

Readings:

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1. Abadie, A. (2020). Statistical nonsignificance in empirical economics. *American Economic Review: Insights*, 2(2):193–208
  2. Crosta, T., Karlan, D., Ong, F., Rüschepöhler, J., and Udry, C. R. (2024). Unconditional cash transfers: A bayesian meta-analysis of randomized evaluations in low and middle income countries. Working Paper 32779, National Bureau of Economic Research
  3. Hjort, J., Moreira, D., Rao, G., and Santini, J. F. (2021). How research affects policy: Experimental evidence from 2,150 brazilian municipalities. *American Economic Review*, 111(5):1442–80
  4. Olken, B. A., Weiss, A., and Hanna, R. (2026). Social protection: Policymaker beliefs and empirical evidence. In *The Handbook on Social Protection*. MIT Press, Cambridge, MA
  5. \*Kansikas, C., Mani, A., and Niehaus, P. (2025). Structuring cash transfers: cash flow preferences, seasonality, and financial decisions in rural kenya. Technical report, UC San Diego

## **Week 8: Giving people cash conditionally**

Problem set 2 on the marginal value of public funds is due.

Guiding questions and learning objectives:

- *Why does the government give people cash only when they continue finishing certain tasks?*  
Understand the appeals of conditional cash transfer programs, and know which appeals hold empirically when multiple outcomes are policy-relevant (Baird et al., 2011).
- *How do we come up with better program designs?*  
Understand how randomized controlled trials can help validate complex models and increase our confidence in predicting the impacts of alternative program designs (Todd and Wolpin, 2006).

Readings:

1. Baird, S., McIntosh, C., and Özler, B. (2011). Cash or condition? evidence from a cash transfer experiment \*. *The Quarterly Journal of Economics*, 126(4):1709–1753
2. Todd, P. E. and Wolpin, K. I. (2006). Assessing the impact of a school subsidy program in mexico: Using a social experiment to validate a dynamic behavioral model of child schooling and fertility. *American Economic Review*, 96(5):1384–1417
3. \*Parker, S. W. and Vogl, T. (2023). Do conditional cash transfers improve economic outcomes in the next generation? evidence from mexico. *The Economic Journal*, 133(655):2775–2806

## **Week 9: Giving people something else**

Guiding questions and learning objectives:

- *Why does the government give people things other than cash?*  
Understand how vouchers and in-kind transfers differ from unconditional transfers in affecting local prices and supplies, providing insurance against price shocks, and targeting populations with certain characteristics.

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## Readings:

1. Gadenne, L. and Singhal, M. (2026). The form of transfers: In-kind, cash, or vouchers? In *The Handbook on Social Protection*. MIT Press, Cambridge, MA
2. Gadenne, L., Norris, S., Singhal, M., and Sukhtankar, S. (2024). In-kind transfers as insurance. *American Economic Review*, 114(9):2861–97
3. Diamond, R. and McQuade, T. (2019). Who wants affordable housing in their backyard? an equilibrium analysis of low-income property development. *Journal of Political Economy*, 127(3):1063–1117
4. Lieber, E. M. J. and Lockwood, L. M. (2019). Targeting with in-kind transfers: Evidence from medicaid home care. *American Economic Review*, 109(4):1461–85
5. \*Chorniy, A., Finkelstein, A., and Notowidigdo, M. J. (2025). Paternalistic social assistance: Evidence and implications from cash vs. in-kind transfers. Working Paper 34506, National Bureau of Economic Research

## Week 10: General equilibrium effects

### Guiding questions and learning objectives:

- *How do social protection programs affect the general economy?*  
Expand evaluation beyond partial equilibrium models and estimate parameters that summarize policy impacts on *all* people regardless of program receipts, such as fiscal multipliers.

## Readings:

1. Egger, D., Haushofer, J., Miguel, E., Niehaus, P., and Walker, M. (2022). General equilibrium effects of cash transfers: Experimental evidence from kenya. *Econometrica*, 90(6):2603–2643
2. Muralidharan, K., Niehaus, P., and Sukhtankar, S. (2023). General equilibrium effects of (improving) public employment programs: Experimental evidence from india. *Econometrica*, 91(4):1261–1295
3. Di Maggio, M. and Kermani, A. (2016). The importance of unemployment insurance as an automatic stabilizer. Working Paper 22625, National Bureau of Economic Research
4. \*Naritomi, J., Gerard, F., and Silva, J. (2025). Cash transfers and the local economy: Evidence from brazil. *Econometrica*. Conditionally accepted

## Week 11: Identifying social welfare function

### Guiding questions and learning goals:

- *What social welfare function is consistent with the implemented policies?*  
Reverse-engineer the social welfare function from a typical program evaluation (Björkegren et al., 2025).



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- What does the social welfare function look like in the taxpayers' minds?  
Know people's attitudes towards the benefits and efficiency costs of redistribution (Stantcheva, 2021).

#### Readings:

1. Björkegren, D., Blumenstock, J. E., and Knight, S. (2025). What do policies value?. *The Review of Economic Studies*, page rdaf089
2. Alatas, V., Banerjee, A., Hanna, R., Olken, B. A., and Tobias, J. (2012). Targeting the poor: Evidence from a field experiment in indonesia. *American Economic Review*, 102(4):1206–40
3. Stantcheva, S. (2021). Understanding tax policy: How do people reason? *The Quarterly Journal of Economics*, 136(4):2309–2369
4. \*Olken, B. A. (2006). Corruption and the costs of redistribution: Micro evidence from indonesia. *Journal of Public Economics*, 90(4):853–870

### Week 12: Evolving changes of social welfare function

#### Guiding questions and learning goals:

- *How does the political process affect the social welfare functions?*  
Understand how voter compositions, politicians, parties, and political regimes may affect the aggregation of social preferences.

#### Readings:

1. Miller, G. (2008). Women's suffrage, political responsiveness, and child survival in american history\*. *The Quarterly Journal of Economics*, 123(3):1287–1327
2. Fujiwara, T. (2015). Voting technology, political responsiveness, and infant health: Evidence from brazil. *Econometrica*, 83(2):423–464
3. Pettersson-Lidbom, P. (2008). Do parties matter for economic outcomes? a regression-discontinuity approach. *Journal of the European Economic Association*, 6(5):1037–1056
4. Chattopadhyay, R. and Duflo, E. (2004). Women as policy makers: Evidence from a randomized policy experiment in india. *Econometrica*, 72(5):1409–1443
5. Burgess, R., Jedwab, R., Miguel, E., Morjaria, A., and Padró i Miquel, G. (2015). The value of democracy: Evidence from road building in kenya. *American Economic Review*, 105(6):1817–51
6. \*Alesina, A. and Fuchs-Schündeln, N. (2007). Good-bye lenin (or not?): The effect of communism on people's preferences. *American Economic Review*, 97(4):1507–1528

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## Week 13: Targeting space

Pre-analysis plan is due.

Guiding questions and learning goals:

- *What happens when we give some places more resources than others?*  
Understand the role of migration and the housing market in determining the impact of place-based policies by going through the Rosen-Roback model.

Readings:

1. Roback, J. (1982). Wages, rents, and the quality of life. *Journal of Political Economy*, 90(6):1257–1278
2. Kline, P. and Moretti, E. (2014). People, places, and public policy: Some simple welfare economics of local economic development programs. *Annual Review of Economics*, 6(Volume 6, 2014):629–662
3. Kline, P. and Moretti, E. (2013). Local economic development, agglomeration economies, and the big push: 100 years of evidence from the tennessee valley authority \*. *The Quarterly Journal of Economics*, 129(1):275–331
4. \*Lu, Y., Wang, J., and Zhu, L. (2019). Place-based policies, creation, and agglomeration economies: Evidence from china's economic zone program. *American Economic Journal: Economic Policy*, 11(3):325–60

## Week 14: Local public finance

Guiding questions and learning goals:

- *Which services should be provided by the local governments?*  
Understand how externality, economies of scale in production, heterogeneity in production costs and preferences, and Tiebout's "voting with their feet" argument govern which services should be provided locally.

Readings:

1. Tiebout, C. M. (1956). A pure theory of local expenditures. *Journal of Political Economy*, 64(5):416–424
2. Oates, W. E. (1999). An essay on fiscal federalism. *Journal of Economic Literature*, 37(3):1120–1149
3. Bayer, P., Ferreira, F., and McMillan, R. (2007). A unified framework for measuring preferences for schools and neighborhoods. *Journal of Political Economy*, 115(4):588–638
4. \*Diamond, R. (2017). Housing supply elasticity and rent extraction by state and local governments. *American Economic Journal: Economic Policy*, 9(1):74–111

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## Week 15: Decentralization

Guiding questions and learning goals:

- *Should local governments in middle-and low-income countries be responsible for more service provisions?*

Evaluate empirical evidence on decentralization and community-driven development programs and discuss what the evidence implies for the design of local governance reforms.

Readings:

1. Gadenne, L. and Singhal, M. (2014). Decentralization in developing economies. *Annual Review of Economics*, 6(Volume 6, 2014):581–604
2. Casey, K. (2018). Radical decentralization: Does community-driven development work? *Annual Review of Economics*, 10(Volume 10, 2018):139–163
3. Gadenne, L. (2017). Tax me, but spend wisely? sources of public finance and government accountability. *American Economic Journal: Applied Economics*, 9(1):274–314
4. Lipscomb, M. and Mobarak, A. M. (2016). Decentralization and pollution spillovers: Evidence from the re-drawing of county borders in brazil\*. *The Review of Economic Studies*, 84(1):464–502
5. \*Bazzi, S. and Gudgeon, M. (2021). The political boundaries of ethnic divisions. *American Economic Journal: Applied Economics*, 13(1):235–66