**Economics GU4720**

**Empirical macroeconomics and finance**

Instructor: Noémie Pinardon-Touati

Fall 2025

**General information**

Class meetings: Monday & Wednesday 4:10-5:25pm, 517 Hamilton Hall

Office hours: Monday 5:45-6:45pm, 1133 IAB (my office)

Instructor email: [np2842@columbia.edu](mailto:np2842@columbia.edu)

Teaching assistant: Ankit Bhutani

Recitations: TBA

TA office hours: Tuesday 11:00am-12:00pm, IAB 1006A (TA Office)

TA email: [ab4462@columbia.edu](mailto:ab4462@columbia.edu)

**What this course is about**

This course develops empirical methods to investigate key questions in macroeconomics and finance, and discusses the existing empirical evidence on those questions. While models developed in macroeconomics and finance provide theoretical frameworks for understanding economic fluctuations, long-run growth, and policy interventions, empirical work is crucial for testing these models and informing policy decisions. The course will examine key macroeconomics/finance questions—such as the sources of short-run fluctuations, the determinants of long-run growth, or the role of financial markets in business cycles—through the lens of modern empirical techniques. We will put a special emphasis on implications for the design of economic policy. For instance, we will consider what the empirical evidence tells us on questions such as: can stimulus checks boost consumer spending? does monetary policy affect investment? should governments invest in R&D? Special attention will be given to recent advances in identification strategies, including high-frequency event studies, differences-in-differences approaches, and instrumental variables tailored to macroeconomic settings. By integrating empirical evidence with theoretical insights, the course aims to equip students with the tools to critically assess macroeconomic policy and contribute to ongoing debates in the field.

**Goals**

* Gain a strong command of empirical methods in macroeconomics and finance, with an emphasis on causal identification strategies.
* Learn how to connect theoretical macroeconomic and financial models to empirical tests, assessing their validity and applicability.
* Critically assess recent empirical research in macroeconomics and finance, evaluating both methodological approaches and substantive findings.
* Understand the latest empirical evidence on key macroeconomic and financial questions and analyze its implications for economic policy and decision-making.

**Prerequisites**

ECON 3211, ECON 3213, and UN 3412.

**Basis for Evaluation**

The course grade will be based on the following elements:

*Diagnostic exam (improvement-only):* 10 percent

*In-class quizzes:* 15 percent

*Midterm exam:* 30 percent

*Final exam:* 45 percent

In the third week of class, there will be a 45 minutes “diagnostic” exam. This exam is meant to help you assess your command of the important concepts introduced in the first weeks of class. This exam will count towards your final grade only if it improves the grade.

There will be a series of five short in-class quizzes (approx. 15 minutes) over the course of the term [see calendar]. The part of the course grade based on these quizzes will be based on the student’s best 4 out of the 5 quizzes. Participation in all in-class quizzes is mandatory, even if you expect your grade in a specific quiz not to be counted.

**Class Policies**

**Academic dishonesty.** As members of an academic community, each of us has a responsibility to participate in scholarly discourse and research in a manner characterized by intellectual honesty and scholarly integrity, and plagiarism is a very serious violation. While I encourage you to discuss the course readings and assignments with your classmates, all work that you turn in, both for assignments and on exams, must be your own. Any suspected case of plagiarism will be reported to the university, and students who breach their intellectual responsibility in this regard should anticipate being asked to leave Columbia.

**No make-up exams.** For this class there is a strict no make-up exam policy. If you miss one or several quizzes, the part of the course based on quizzes will be based on the average of the other quizzes. If you miss the midterm, you will not be granted a make-up exam. Instead, all weight for your midterm will be transferred to your final. If you miss the final, there is a Columbia University policy for this occurrence. The University governs the administration of all missed final exams.

**Re-grading.** A regrade request for an exam must be submitted to the TA within 7 days after we return the exam to you. The request for a regrade must be written and attached to the exam when submitting the exam for a regrade. The request must include a description of what the problem is and why you think the exam should be graded differently. In such cases, we will regrade the entire exam, not just the question you identified.

**UW grade (not applicable to CC/GS students).** Students who complete the diagnostic exam and/or the first quiz are not eligible for the UW.

**Disabilities.** If you are a student with a disability and have a DS-certified ‘Accommodation Letter’, please email me to confirm your accommodation needs. If you believe that you might have a disability that requires accommodation, you should contact [Disability Services](http://health.columbia.edu/services/ods) at 212-854-2388 and [disability@columbia.edu](mailto:disability@columbia.edu).

**Class Conduct.** Cell phone use is not allowed. Laptops are fine for taking notes, but please respect your classmates and instructor by limiting yourself to class-related activities. Though you may be a phenomenal multi-tasker, using a laptop for purposes other than taking notes is distracting to those around you.

**Attendance.** I do not register attendance. Everything that I say during lectures constitutes material for exams.

**Questions and Communication.** All questions related to the course content must be posted on EdDiscussion (link available in Courseworks). For all other questions, please email the TA and me.

**Calendar and readings**

**Syllabus.** I may make changes to the syllabus over the course of the semester. The most recent version of the syllabus will always be posted on Courseworks.

**Textbook**. There is no required textbook for this course. The following textbooks may be useful as background reading (I emphasize that these are not required):

Kurlat, P., A Course in Modern Macroeconomics (<https://sites.google.com/view/pkurlat/a-course-in-modern-macroeconomics>)

Jones, C., Macroeconomics

Romer, D., Advanced Macroeconomics

For econometric methods, a useful reference is Joshua D. Angrist and Jorn-Steffen Pischke Mastering ’Metrics: The Path from Cause to Effect

**Calendar [tentative]**

|  |  |  |  |
| --- | --- | --- | --- |
| **Date** | **Lecture** | **Topic** | **Assessments** |
| 3-Sep-2025 | 1 | Intro |  |
| 8-Sep-2025 | 2 | Causal inference for macro & finance |  |
| 10-Sep-2025 | 3 | Consumption |  |
| 15-Sep-2025 | 4 | Consumption |  |
| 17-Sep-2025 | 5 | Consumption |  |
| 22-Sep-2025 | 6 | Labor supply | Diagnostic exam |
| 24-Sep-2025 | 7 | Labor supply |  |
| 29-Sep-2025 | 8 | Labor supply |  |
| 1-Oct-2025 | 9 | Investment | Quiz #1 |
| 6-Oct-2025 | 10 | Investment |  |
| 8-Oct-2025 | 11 | Production function 1: Substituting away from Russian gas | |
| 13-Oct-2025 | 12 | Production function 2: AI and jobs |  |
| 15-Oct-2025 | 13 | Monetary non-neutrality | Quiz #2 |
| 20-Oct-2025 | 14 | Monetary non-neutrality |  |
| 22-Oct-2025 | 15 | MID-TERM EXAM | MID-TERM EXAM |
| 27-Oct-2025 | 16 | Phillips curve |  |
| 29-Oct-2025 | 17 | Phillips curve |  |
| 3-Nov-2025 | 18 | Government spending |  |
| 5-Nov-2025 | 19 | Government spending | Quiz #3 |
| 10-Nov-2025 | 20 | Finance, the supply of capital, and long-run growth |  |
| 12-Nov-2025 | 21 | Corporate finance, financing frictions |  |
| 17-Nov-2025 | 22 | Corporate finance, financing frictions |  |
| 19-Nov-2025 | 23 | Banking crises and the Great Recession | Quiz #4 |
| 24-Nov-2025 | 24 | Banking crises and the Great Recession |  |
| 1-Dec-2025 | 25 | Growth & growth policies |  |
| 3-Dec-2025 | 26 | Growth & growth policies | Quiz #5 |
| 8-Dec-2025 | 27 | Climate Change and the Macroeconomy |  |
| 15-Dec-25 |  | FINAL EXAM | FINAL EXAM |

**Readings for each topic.** Below, I list references for the material presented in class. References prefixed with an asterisk (\*) are strongly recommended readings. References prefixed with a plus sign (+) are readings that will be covered during recitations.

**Course introduction & Causal inference for macroeconomics and finance**

Angrist, J. D. and Pischke. Mastering ’Metrics: The Path from Cause to Effect. Chapters 1 and 2.

(+) Angrist, J.D., Graddy, K. and Imbens, G.W., 2000. The interpretation of instrumental variables estimators in simultaneous equations models with an application to the demand for fish. *The Review of Economic Studies*, *67*(3), pp.499-527.

**Consumption**

Kurlat, Pablo. 2020. A Course in Modern Macroeconomics. Chapter 6.

Angrist, J. D. and Pischke. Mastering ’Metrics: The Path from Cause to Effect. Chapter 3.

Johnson, D. S., Parker, J. A., & Souleles, N. S. (2006). Household expenditure and the income tax rebates of 2001. American Economic Review, 96(5), 1589-1610.

(\*) Parker, J. A., Souleles, N. S., Johnson, D. S., & McClelland, R. (2013). Consumer spending and the economic stimulus payments of 2008. American economic review, 103(6), 2530-2553.

Kaplan, G., & Violante, Gv. L. (2014). A model of the consumption response to fiscal stimulus payments. Econometrica, 82(4), 1199-1239.

(\*) Boehm, J., Fize, E., & Jaravel, X. (2025). Five facts about MPCs: Evidence from a randomized experiment. *American Economic Review*, *115*(1), 1-42.

(+) Fagereng, Andreas, Martin B. Holm, and Gisle J. Natvik. 2021. "MPC Heterogeneity and Household Balance Sheets." *American Economic Journal: Macroeconomics* 13 (4): 1–54**.**

**Labor supply**

Kurlat, Pablo. 2020. A Course in Modern Macroeconomics. Chapter 7.

Angrist, J. D. and Pischke. Mastering ’Metrics: The Path from Cause to Effect. Chapter 5.

(\*) Sigurdsson, J. 2024. Labor Supply Responses and Adjustment Frictions: A Tax-Free Year in Iceland. Working paper.

(\*) Martinez, I. Z., Saez, E., & Siegenthaler, M. (2021). Intertemporal labor supply substitution? Evidence from the Swiss income tax holidays. American Economic Review, 111(2), 506-46.

(\*) Cesarini, D., Lindqvist, E., Notowidigdo, M. J., & Östling, R. (2017). The effect of wealth on individual and household labor supply: Evidence from Swedish lotteries. American Economic Review, 107(12), 3917-46.

(+) Aguiar, M., Bils, M., Charles, K.K. and Hurst, E., 2021. Leisure luxuries and the labor supply of young men. *Journal of Political Economy*, *129*(2), pp.337-382.

**Investment**

Kurlat, Pablo. 2020. A Course in Modern Macroeconomics. Chapter 8.

(\*) Zwick, E., & Mahon, J. (2017). Tax policy and heterogeneous investment behavior. American Economic Review, 107(1), 217-248.

(\*) Kennedy, Patrick J., Christine Dobridge, Paul Landefeld, and Jake Mortenson. 2022. “ The Efficiency-Equity Tradeoff of the Corporate Income Tax: Evidence from the Tax Cuts and Jobs Act.” Working Paper.

**Production function 1: Substituting away from Russian gas**

(\*) Bachmann, R., Baqaee, D., Bayer, C., Kuhn, M., Löschel, A., Moll, B., Peichl, A., Pittel, K. and Schularick, M., 2022. What if? The macroeconomic and distributional effects for Germany of a stop of energy imports from Russia. *ECONtribute Policy Brief No. 028*.

(\*) Moll, B., Schularick, M. and Zachmann, G., 2023. The power of substitution: The great German gas debate in retrospect. *Brookings Papers on Economic Activity*, *2023*(2), pp.395-481.

**Production function 2: AI and jobs**

(\*) Acemoglu, D. and Restrepo, P., 2018. Artificial intelligence, automation, and work. In *The economics of artificial intelligence: An agenda* (pp. 197-236). University of Chicago Press.

(\*) Hampole, M., Papanikolaou, D., Schmidt, L.D. and Seegmiller, B., 2025. Artificial intelligence and the labor market (No. w33509). National Bureau of Economic Research.

(+) Acemoglu, D., Autor, D., Hazell, J. and Restrepo, P., 2022. Artificial intelligence and jobs: Evidence from online vacancies. *Journal of Labor Economics*, *40*(S1), pp.S293-S340.

**Monetary non-neutrality**

**(\*) Romer, C. D., & Romer, D. H. (2004).** A new measure of monetary shocks: Derivation and implications. American Economic Review, 94(4), 1055–1084.

**(\*)** Nakamura, E., & Steinsson, J. (2018). High-frequency identification of monetary non-neutrality: The information effect. The Quarterly Journal of Economics, 133(3), 1283-1330.

(+) Miranda-Agrippino, S., & Ricco, G. (2021). The transmission of monetary policy shocks. American Economic Journal: Macroeconomics, 13(3), 74-107.

(+) **Gertler, M., & Karadi, P. (2015).** Monetary policy surprises, credit costs, and economic activity. American Economic Journal: Macroeconomics, 7(1), 44–76.

**The Phillips curve**

(\*) Mavroeidis, S., Plagborg-Møller, M., & Stock, J. H. (2014). Empirical evidence on inflation expectations in the New Keynesian Phillips Curve. *American Economic Journal: Journal of Economic Literature*, *52*(1), 124-188.

(\*) Hazell, J., Herreno, J., Nakamura, E., & Steinsson, J. (2022). The slope of the Phillips Curve: evidence from US states. *The Quarterly Journal of Economics*, *137*(3), 1299-1344.

(+) Cerrato, A., Gitti, G. 2025. The Return of the Phillips Curve: Evidence from US Cities. Working paper.

**Government spending**

(\*) Ramey, V.A., 2011. Identifying government spending shocks: It's all in the timing. *The Quarterly Journal of Economics*, *126*(1), pp.1-50.

(\*) Nakamura, E., & Steinsson, J. (2014). Fiscal stimulus in a monetary union: Evidence from US regions. American Economic Review, 104(3), 753-792.

(\*) Zidar, O., 2019. Tax cuts for whom? Heterogeneous effects of income tax changes on growth and employment. *Journal of Political Economy*, *127*(3), pp.1437-1472.

Chodorow-Reich, G. (2019). Geographic cross-sectional fiscal spending multipliers: What have we learned? American Economic Journal: Economic Policy, 11(2), 1-34.

Ramey, V.A., 2019. Ten years after the financial crisis: What have we learned from the renaissance in fiscal research?. *Journal of Economic Perspectives*, *33*(2), pp.89-114.

(+) Serrato, J.C.S. and Wingender, P., 2016. Estimating local fiscal multipliers (No. w22425). National Bureau of Economic Research.

Christina D. Romer and David H. Romer, “The Macroeconomic Effects of Tax Changes: Estimates Based on a New Measure of Fiscal Shocks,” American Economic Review 100, no. 3 (June 2010): 763–801.

**Finance, the supply of capital, and long-run growth**

(\*) King, R., and Levine, R. 1993. “Finance and Growth: Schumpeter Might be Right.” Quarterly Journal of Economics, 108(3), 717-737

(\*) Rajan, R., and Zingales, L. 1998 “Financial Dependence and Growth.” American Economic Review 88(3), pp. 559-586.

Levine, R. 2005. “Finance and Growth: Theory and Evidence.” Handbook of Economic Growth, Volume 1, Part A, 2005, pp. 865-934. Section 3.

Papaioannou, E. 2007. “Finance and growth: a macroeconomic assessment of the evidence from a European angle.” ECB Working Paper, No 787.

**Corporate finance, financing frictions**

(\*) Rauh, J. 2006. Investment and Financing Constraints: Evidence from the Funding of Corporate Pension Plans. Journal of Finance 61, 33-71.

(\*) Chaney, T, Sraer, D., and Thesmar, D. 2012. “The Collateral Channel: How Real Estate Shocks Affect Corporate Investment.” American Economic Review, 102 (6): 2381- 2409.

(+) Lian, C and, Ma, Y. 2021. “Anatomy of Corporate Borrowing Constraints.” The Quarterly Journal of Economics, 136(1): 229-291

**Banking crises and the Great Recession**

(\*) Schularick, M., and Taylor, A. 2012. “Credit Booms Gone Bust: Monetary Policy, Leverage Cycles, and Financial Crises, 1870-2008”. American Economic Review 102 (2): 1029-1061

Dell’Ariccia, G., Detragiache, D., Rajan, R. 2008. “The real effect of banking crises.” Journal of Financial Intermediation, Volume 17, Issue 1, pp. 89-112.

(\*) Chodorow-Reich, G. 2014. “The employment effects of credit market disruptions: Firm-level evidence from the 2008-9 financial crisis.” Quarterly Journal of Economics 129 (1): 1-59.

Rajan, R., & Ramcharan, R. 2015. “The anatomy of a credit crisis: The boom and bust in farm land prices in the United States in the 1920s.” American Economic Review, 105(4), 1439-1477.

(\*) Mian, A., & Sufi, A. (2011). House prices, home equity–based borrowing, and the us household leverage crisis. American Economic Review, 101(5), 2132-2156.

Mian, A., Sufi, A., & Verner, E. (2017). Household debt and business cycles worldwide. The Quarterly Journal of Economics, 132(4), 1755-1817.

**Growth & growth policies**

(\*) Acemoglu, D., Johnson, S., & Robinson, J. A. (2001). The colonial origins of comparative development: An empirical investigation. American Economic Review, 91(5), 1369-1401.

(\*) Bloom, N., Van Reenen, J., & Williams, H. (2019). A toolkit of policies to promote innovation. Journal of economic perspectives, 33(3), 163-184.

(+) Nunn, N. (2008). The long-term effects of Africa's slave trades. The Quarterly Journal of Economics, 123(1), 139-176.

Howell, S. T. (2017). Financing innovation: Evidence from R&D grants. American Economic Review, 107(4), 1136-64.

**Climate Change and the Macroeconomy**

(\*) Dell, M., Jones, B. F., & Olken, B. A. (2012). Temperature shocks and economic growth: Evidence from the last half century. American Economic Journal: Macroeconomics, 4(3), 66-95.

(\*) Bilal, A., & Känzig, D. R. (2024). The macroeconomic impact of climate change: Global vs. local temperature (No. w32450). National Bureau of Economic Research.

(+) Känzig, D. R. (2023). The unequal economic consequences of carbon pricing (No. w31221). National Bureau of Economic Research.