Syllabus

[cmcd.economia@fgv.br]

Course: Applied Macroeconomics
Professor:

FIRST SEMESTER, 2027

PROGRAM

This course covers recent research topics in economic growth, emphasizing the role of institutions and financial development on growth and economic development. The course discusses applications to Brazil.

BIBLIOGRAPHY

The topics for the lectures are as follows:

1. Misallocation, Financial Frictions and Capital Accumulation
   - Allub, L., Gomes, P. and Kuehn, Z. (2023). "Human capital and financial development: Firm-level interactions and macroeconomic implications", The Economic Journal, 134 (659), 934-958
   - Antunes, A., T. Cavalcanti and A. Villamil (2008). "The Effects of Financial Repression & Enforcement on Entrepreneurship and Development", Journal of Monetary Economics, 55 (2): 278-297.
   - Antunes, A., T. Cavalcanti, C. Medicino, M. Peruffo and A. Villamil (2020)." Tighter Credit and Consumer Bankruptcy Insurance", working paper
   - Banerjee and Moll (2010). "Why do Misallocation Persist?" American Economic Journal: Macroeconomics, 2(1): 189-206.
   - Baqaee, D. and Farhi, E. (2020). "Productivity and Misallocation in General Equilibrium", Quarterly Journal of Economics, 135(1), 105-163
   - Bils, M., P. J. Klenow and C. Ruane (2021). "Misallocation or Mismeasurement?", Journal of Monetary Economics, 124, S39-S56
   - Buera, Kaboski and Shin (2011). "Finance and Development: A Tale of Two Sectors" American Economic Review, 101(5): 1964-2002.
   - Buera, Kaboski and Shin (2021). "The Macroeconomics of Microfinance", Review of Economic Studies, 88(1), 126-161
   - Buera, K. and Y. Shin (2013). "Finacial Frictions and the Persistence of History: A Quantitative Exploration", Journal of Political Economy, 121 (2): 221-272

- Camelo, F. (2023). “Investment Decisions and Capital Accumulation: Firm-Level Evidence from Brazil”. Working paper
- Castro, R., G. L. Clementi and G. MacDonald (2004). “Investor Protection, Optimal Incentives, and Economic Growth”, Quarterly Journal of Economics, 119 (3).
- Cavalcanti, T., J. Kaboski, B. Martins and C. Santos (2023). “Financing Costs and Development”, R&R American economic Review
- Cavalcanti, T., Mendes, A. and Pannella, P. (2023). “Entrepreneurship and Misallocation in Production Network Economies”. Economic Theory
- Exler, F., MacGee, J., Livshits, I. and Tértilt, M. (2024). “Consumer Credit with Over-Optimistic Borrowers”, Working paper.
- Farboodi, M. and Kondor, P. (2023). “Cleansing by tight credit: Rational cycles and endogenous lending standards”, Journal of Financial Economics, 150(1), 46-67
- Feng, Y. and Ren, J. (2021). “Skill bias, financial frictions, and selection into entrepreneurship”, Journal of Development Economics, 162, 103046
- **Haltiwanger, J., R. Kulick and C. Syverson (2019). “Misallocation Measures: The Distortion that Ate the Residual”, Working paper.
- **Hsieh and Klenow (2009). “Misallocation and Manufacturing TFP in China and India,” Quarterly Journal of Economics, 124: 1403-1448.
- Hsieh and Klenow (2014). “The Life Cycle of Plants in India and Mexico,” Quarterly Journal of Economics, 129: 1035-1084.
- Huang, E. and Qiu, X. (2023). “Precautionary Mismatch”. Working paper
- Humphries, J.E. and Neilson, C. and Ulyssea G. (2020). “Information Frictions and Access to the Paycheck Protection Program”, Journal of Public Economics, vol. 190, October 2020.
- Itskhoki, O. and B. Moll (2019). “Optimal Development Policies with Financial Frictions”, Econometrica, 87 (1): 139-173
- Jovanovic, B. 2014. “Misallocation and Growth”, American Economic Review, 104 (4): 1149-71.
- Khan, A., Senga, T. and Thomas, J. (2021). “Default Risk and Aggregate Fluctuations in an Economy with Production Heterogeneity”. Working paper
- Kyiotaki, N., Moore, J., Zhang, D. (2021). “Credit Horizons”. Working paper
- Levine, R., N. Loayza and T. Beck (2000). “Financial Intermediation and Growth: Causality and Causes,” Journal of Monetary Economics 46.
- Midrigan and Xu (2014). “Finance and Misallocation: Evidence from Plant-Level Data,” American Economic Review, 104(2): 422-458.
- Pérez-Sebastian, F.; Serrano-Quintero, R. and Steinbuks, J. (2023). “Spatial Misallocation of Complementary Infrastructure Investment”, Working Paper
- Peter, A. (2025). “Equity Frictions and Firm Ownership”, Working Paper

2. Structural Transformation and Technological Change

- Albert, C.; Bustos, P.; Ponticelli, J. (2026). “Climate Change and Spatial Capital Reallocation”, Working Paper

- Adamopoulos, T., Brandt, L. Chen, C. and Restuccia, D. (2024). "Land Security and Mobility Frictions". The Quarterly Journal of Economics, 139 (3), 1941-1987
- Alviarez, V., Chen, C., Pandalai-Nayar, N., Varela, L., Yi, K. and Zhang, H. (2023). "Multinationals and Structural Transformation". Working paper
- Buera, F. J., Rogerson, R. and Vizcaino, J. I. (2021). "Skill-Biased Structural Change.", Review of Economic Studies.
- Buera, F. J., and Kaboski, J. and Zhao, M. (2019). "Quantifying the Growth in Services: the Role of Skills, Scale, and Female Labor Supply.'', Journal of Human Capital, 57 (Summer 2019): 157-187
- Bustos, Caprettini and Ponticelli (2016). 'Agricultural Productivity and Structural Transformation. Evidence from Brazil,' American Economic Review, 106 (6): 1320-1365.
- Bustos, Garber, and Ponticelli (2020). " Capital Accumulation and Structural Transformation," *The Quarterly Journal of Economics*, 135(2), 1037–1094
- Cavalcanti, T.; Hasna, Z. and Santos, C. (2023). "Climate Change Mitigation Policies: Aggregate and Distributional Effects", Economic Journal
- **Cavalcanti, P. Monge-Naranjo, A., and L. Pereira (2025). "Of Cities and Slums", Journal of Political Econony
- Caunedo, J., Jaume, D. and Keller, E. (2023). "Occupational exposure to capital-embodied technical change", American Economic Review, 113(6), 1642-85
- Caunedo, J. and Keller, E. (2021). "Capital Obsolescence and Agricultural Productivity", The Quarterly Journal of Economics, February 2021.
- Cervellati, Matteo, and Uwe Sunde. 2015. "The Economic and Demographic Transition, Mortality, and Comparative Development." American Economic Journal: Macroeconomics, 7(3): 189-225.
- Delalibera, B.; Serrano-Quintero, R. and Zimmermann, G. (2023). "Reforms in the natural gas sector and economic development". Economic Modelling, 125, 106358
- Doss, C., Gollin, D., Gottlieb, C. and Poschke, M. 2024. "Gender, Work, and Structural Transformation". Working paper.
- Duernecker, G and B. Herrendorf (2022). "Structural Transformation of Occupation Employment", Economica
- Duarte, M. 2021. "Services and the Decline of the U.S. Employment-to-Population Ratio". Working paper.
- Eeckhout, J. Jovanovic, B. 2012. "Occupational Choice and Development." Journal of Economic Theory
- Fons-Rosen, C., Roldan-Blanco, P. and Schmitz, T. (2021). "The Aggregate Effects of Acquisitions on Innovation and Economic Growth". Working paper.
- Herrendorf, B., Rogerson, R. and A. Valentinyi (2021). "Structural Change in Investment and Consumption – A Unified Analysis", The Review of Economic Studies, 88(3), 1311–1346
- Herrendorf, B. and T. Schoellman (2018). "Wages, Human Capital, and Barriers to Structural Transformation", American Economic Journal: Macroeconomics, 10 (2): 1-23.
- Hobijn, B., Schoellmand, T. and Vindas, A. (2018). "Structural Transformation by Cohort", Working paper.
- Porzio, T., Rossi, F. and Santangelo, G. (2022). "The Human Side of Structural Transformation: Human Capital, Schooling And Mobility Frictions". American Economic Review, 112(8), 2774-2814

- Ribeiro, B. (2026). “New and Old Technologies”. Working Paper

3. The role of the government in the credit market and in the labor market
   - Antunes, A., T. Cavalcanti and A. Villamil (2014). “The Effects of Credit Subsidies on Development”, Economic Theory, 58(1): 1-30.
   - Baley, I. and Blanco, A. (2022). “The Long-Run Effects of Corporate Tax Reforms”. Working paper
   - Bradley, Postel-Vinay and Turon (2017). ‘Public Sector Wage Policy and Labor Market Equilibrium: A Structural Model’, Journal of the European Economic Association.
   - Brotherhood, L.; Da Mata, D.; Guner, N.; Kircher, P. and Santos, C. (2023). “Labor Market Regulation and Informality”, Working paper
   - Brotherhood, L., Iachan, F. and Parente R. (2025). “Minimum Wages, Inequality, and the Informal Sector”, Working paper.
   - Brotherhood, L., Kircher, P., Santos, C and Tértilt, M. (2025). “Optimal Age-based Policies for Pandemics: An Economic Analysis of Covid-19 and Beyond”, R&R at The Review of Economic Studies
   - Buera, F. and Shin, Y. (2017). “Productivity Growth and Capital Flows: The Dynamics of Reforms”, American Economic Journal: Macroeconomics, July 2017.
   - Buera, F., Kaboski, and Shin, Y. (2018). “Taking Stock of the Evidence on Micro-Financial Interventions”, The Economics of Poverty Traps.
   - Cavalcanti Fereira, P.; Delalibera, B; Parente, R. (2026). “Social Security Reforms, Retirement and Sectoral Decisions”, International Economic Review
   - **Cavalcanti, T.; Cavalcanti, P. F.; Fiedler, F.; Pereira, L.; Santos, C. (2026). " Voting Restrictions, Education and Poverty". Working Paper
   - Cavalcanti, T. and P. Vaz (2016). “Access to Long-Term Credit and Productivity of Small and Medium Firms: A Causal Evidence, Economics Letters, 21-25.
   - Delalibera, B., Ferreira, P., Gomes, D. and Johann Soares. (2023). “Tax Reforms and Network Effects”, Journal of Economic Dynamics and Conrol, 163
   - Dix-Carneiro, R., Goldberg, P., Meghir, C. and Ulyssea, G. (2026). “Trade and Domestic Distortions: The Case of Informality”. Econometrica, 94(2).
   - Engbom, N. and Moser, C. (2022). “Earnings Inequality and the Minimum Wage: Evidence from Brazil”, American Economic Review, 112 (12): 3803-3847
   - Engbom, N., Gonzaga, G., Moser, C. and Olivieri, R. (2022). “Earnings Inequality and Dynamics in the Presence of Informality: The Case of Brazil”, Quantitative Economics, 13 (4): 1405-1446
   - Erosa, A.; Fuster, L. and Martinez, T. (2023). “Public financing with financial frictions and underground economy”. Journal of Monetary Economics, 135, 20-36
   - Gomes, P. and Kuehn, Z. (2021). “You´re the one that I want! Public employment and women's labor market outcomes”. Working paper
   - Herreno, J. and Ocampo, S. (2023). “The Macroeconomics Consequences of Subsistence Self-Employment”, Journal of Monetary Economics, 136, 91-106
   - Jaume, David (2021). ‘The Labor Market Effects of an Educational Expansionl’, Journal of Development Economics, 149
   - Lagakos, D., Moll, B., Porzio, T., Qian, N. and Schoellman, T. (2018).” Life-Cycle Wage Growth Across Countries”, Journal of Political Economy.

- Luduvice, A. (2024). “The Macroeconomic Effects of Universal Basic Income Programs”, Journal of Monetary Economics
- Luduvice, A.; Martinez, T. and Sollaci, A. (2024). “Minimum Wage, Business Dynamism, and the Life Cycle of Firms”. Working paper
- McKiernan, K. (2021). “Social Security Reform in the Presence of Informality”, Review of Economic Dynamics, 40: 228-251
- Souza, G. and Li, H. (2025). “The Employment Consequences of Anti-Dumping Tariffs: Lessons from Brazil”, Working Paper

4. Diffusion of Ideas/Technology and Formation of Skills
   - Adao, R., Beraja, M. and Pandalai-Nayar, N. 2021. “Technological Transitions with Skill Heterogeneity”. Working paper.
   - Bento, P. and Olmstead-Rumsey, J. (2022). “Market Concentration and the Productivity Slowdow”. Review of Economic Studies
   - Berthold Herrendorf and Arilton Teixeira, (2005). “How Barriers to International Trade affect TFP”, Review of Economic Dynamics, 8 (4), 866-876
   - Buera, F., Hopenhayn, H., Shin, Y. and Trachter, N. (2026). “Big Push in Distorted Economies”. Working paper
   - Buera, F. and Oberfield, E. (2015) “The Global Diffusion of Ideas, Econometrica, 88 (1), 83-114
   - Coe, D.T., E. Helpman, A.Hoffmaister, 1997. “North-South R&D Spillovers,” Economic Journal, 107 (440), 134-149
   - Comim e Hobijn, 2010. “An Exploration of Technology Diffusion.” American Economic Review 100 (5), 203–59
   - Comim and Hobijn, 2011. “Technology Diffusion and Postwar Growth, NBER, Annual Cambridge, MA
   - DasGupta, K. 2012. “Learning and Knowledge Diffusion in a Global Economy”, Journal of International Economics, 87(2), 323-336
   - Delalibera, B., Pereira, L. and Rios, H., 2024. Capital Misallocation and Economic Development in a Dynamic Open Economy”, Journal of Economic Dynamics and Control, Vol. 168, 2024
   - Eeckhout, J. Jovanovic, B. 2012. “Knowledge Spillovers and Inequality”, American Economic Review, 92 (5), 1290-1307
   - Ferriere, A., Navarro, G. and Reyes-Heroles, R. 2022. “Escaping the Losses from Trade: The Impact of Heterogeneity on Skill Formation”. Working paper.
   - Garicano, L. and Rossi-Hansberg, E. 2012. “Organizing Growth.”, Journal of Economic Theory, 147(2), 623-656
   - Jesse Perla, Christopher Tonetti, and Michael E. Waugh, (2021). “Equilibrium Technology Diffusion, Trade, and Growth”, American Economic Review, 111(1), 73-128
   - Jonathan Chiu & Cesaire Meh & Randall Wright, 2017. "Innovation and Growth with Financial, and other, Frictions”, International Economic Review, 58 (1), 95-125
   - Jovanovic, B. and Wang, Z. 2025. “Idea Diffusion and Property Rights”. Working paper
   - Krusell, Per, and Erika Färnstrand Damsgaard, 2010. "The World Distribution of Income: Country TFP choice in a Nelson-Phelps Economy", working paper
   - Lagakos, D., Moll, B., Porzio, T., Qian, N. and Schoellman T. (2018). “Life-Cycle

Human Capital Accumulation across Countries: Lessons from US Immigrants", Journal of Human Capital, vol. 12. N. 2.
- Lucas, R. E. and Moll, B. 2014. "Knowledge Growth and the Allocation of Time", Journal of Political Economy, 122 (1), 1-51
- Martinez, T. and Mello, L. 2024. "Trade Shocks and Higher-Order Earnings Risk in Local Labor Markets", International Economic Review, 65(4), 1717-45
- Parente, R. and Shi, R. (2025). "Non-traded gains from trade". Working paper
- Parente, S. and E.C. Prescott, 1994. "Barriers to Technology Adoption and Development," Journal of Political Economy, 102(2), 298-321.
- **Souza, G. 2024. "The Labor Market Consequences of Appropriate Technology", Working Paper
- Souza, G. and Li, H. 2024. "Robots, Tools, and Jobs: Evidence from Brazilian Labor Markets", Woking paper
- Souza, G.,Gaetani, R. and Mestieri, M. 2025. "More Trade, Less Diffusion: Technology Transfers and the Dynamic Effects of Import Liberalization", Woking Paper
- Vasconcelos, R, 2022. "Effects of Patent Infringements on Innovation and Labor Market Outcomes: Evidence from Brazil", Working paper.

5. Misallocation of talents, specific policies and endogenous productivity

- Alvarez, Benguria, Engbom and Moser (2018). 'Firms and the Decline in Earnings Inequality in Brazil,' American Economic Journal: Macroeconomics, 10(1): 149-189.
- Antunes and Cavalcanti (2007). "Start Up Costs, Limited Enforcement, and the Hidden Economy," European Economic Review 51(1): 203-224.
- Banerjee, A., Basu, P. and Keller, E. (2022). "Cross-Country Disparities in Skill Premium and Skill Acquisition", Economic Inquiry
- Barros Jr., F., Delalibera, B., Nakabashi, L. and Ribeiro, M. (2023). "Misallocation of talent, teachers' human capital, and development in Brazil", Journal of Macroeconomics, 77, 2023, 103542
- Benhamouche, Z. and Martinez, T. (2022). "Misallocation and Human Capital Accumulation over the Life Cycle". Working paper
- Bettoni, L. and Santos, M. (2022). "The Effects of Public Sector Employment on Household Savings and Labor Supply", Working paper
- Bettoni, L. and Santos, M. (2023). "Public Sector Employment and Aggregate Fluctuations", Macroeconomic Dynamics, 28(3), 718-744
- Bils, M., Kaymak, B. and Wu, K. 2024. "Labor Substitutability among Schooling Groups". American Economic Journal: Macroeconomics, 16(4), 1-34
- Brotherhood, L. and Delalibera, B. (2020). "Minding the Gap Between Schools and Universities", Journal of Economic Dynamics and Control, Vol. 120, November.
- Brotherhood, L; Herskovic, B. and Ramos, J. (2023). "Income-Based Affirmative Action in College Admissions". The Economic Journal, 33(653), 1810-1845
- Buera, F., Hopenhayn, H., Shin, Y. and Trachter, N. (2026). "Big Push in Distorted Economies". Working paper.
- Caunedo, J., Keller, E. and Shin, Y. (2023). "Technology and the Task Content of Jobs across the Development Spectrum", The World Bank of Economic Review, 37(3), 479-493
- Caunedo, J. and Yurdagul, E, (2018). "Who Quits Next? Firm Growth in Growing Economies", Economic Inquiry, October 2018.

- Cavalcanti Ferreira, P.; Delalibera, B.; Gomes, D. and Soares, J. (2024). “Tax reforms and network effects”. Journal of Economic Dynamics and Control, 163, 2024, 104862
- Cavalcanti, T., Fernandes, L., Rachter, L. and Santos, C. (2026) “Women and Men at Work: Fertility, Occupational Choice and Development”, Working paper.
- **Cavalcanti and dos Santos (2021). “(Mis)Allocation of an Overpaid Public Sector”, Journal of the European Economic Association.
- Cavalcanti and Tavares (2015). “The Output Costs of Gender Discrimination: A Model Based Macroeconomic Estimate.”, Economic Journal, 126 (590): 109-134.
- Cox, A. and Ribeiro, B. (2023). “Spatial Consequences of Corruption: Entry and Location Decisions of Firms”. Working paper
- Cubas, G. and Silos, P. (2021). “Risk and the Misallocation of Human Capital”. Working paper
- Delalibera, B. (2026). “Teacher Allocation Across Educational Stages and Economic Development”, Working Paper
- Garcia-Macia, D., Hsieh, C. and Klenow, P. (2019). “How Destructive is Innovation?”, Econometrica, vol. 85, n. 5.
- Gomes, D., F. Iachan and C. Santos (2020). “Labor Earnings Dynamics with a Large Informal Sector”, Journal of Economic Dynamics and Control, 113
- Guner, Ventura, and Xu (2008), “Macroeconomic Implications of Size Dependent Policies,” Review of Economic Dynamics, 11(4): 721-44.
- Hendricks, L. and Schoellman, T. (2023). “Skilled Labor Productivity and Cross-country Income Differences”, American Economic Journal: Macroeconomics, 15(1), 240-268
- Hsieh, Hurst, Jones and Klenow (2019). “The Allocation of Talent and U.S. Economic Growth”, Econometrica, 87(5): 1439-1474.
- Lagakos, Moll, Porzio, Qian, and Schoellman (2018). “Life-Cycle Wage Growth Across Countries”, Journal of Political Economy, 126(2): 797-848
- Magalhães, L., Martorell, E. and Santaeulalia-Lopis, R. 2022. “Transfer Progressivity and Development”, Working paper
- Morchio, I. and Moser, C. (2026). “The Gender Pay Gap: Micro Sources and Macro Consequences”, *Forthcoming* American Economic Review
- Ngai, R. and Sevinc, O. (2025). “A Multisector Perspective of Wage Stagnation”. Review of Economic Dynamics, 56
- Pena, W. and Siegel, C. (2023). “Routine-biased technological change, structure of employment, and cross-country income differences”. Working paper
- Porzio, T. (2017). “Cross-Country Differences in the Optimal Allocation of Talent and Technology”, Econometrica
- Ugarov, A. (2019). “Talent Misallocation across Countries: Evidence from Educational Achievement Tests”, Working paper
- Ulyssea (2018). “Firms, Informality and Development: Theory and Evidence from Brazil,” American Economic Review, 108(8):2015-2047.
- Tkhir, A. 2021. “Education and Tax Policies in the Presence of Informality”. Working paper

P.S.: This list can be updated during the course.

GRADING

Presentation of a paper of your choice to the class (individual/group task, 50 min. with questions): 30%

- It should be sent by email up to 11:59 pm of the day before the presentation.
- Tips for the presentation can be found on: https://sites.google.com/site/bertholdherrendorf/presentation-tips

Presentation of your paper's idea (individual/group task, 30 min. with questions): 30%

- It should be sent by email up to 11:59 pm of the day before the presentation.
- Tips for the presentation can be found on: https://sites.google.com/site/bertholdherrendorf/presentation-tips

Writeup of paper proposal (homework assignment, individual/group task): 30%

The purpose of making the assignment a paper proposal is that I would rather you get 50% of the way toward a project you are excited to continue after the course finishes than you complete a project in the timeframe of the course to which you will never return. You will formulate an original research idea, develop a practical plan for executing the idea, and take initial steps in the execution. The paper may take the following form:

1. Introduction: What is the question and why is it a question of interest?
2. Literature Review: How does your paper fit into the broader literature?
3. Theoretical Motivation: This could be actual theory or just a sketch of the relevant theory that underlies your question.
4. Data: What data would you use to answer/address this question? Why is the data well suited to the question?
5. Methodology: How would you use the data/model to answer your question? Be explicit about identification and causality, keeping in mind that the same set of empirical facts can often support many theories.
6. Falsification Tests: What other specifications, tests and investigations could either bolster or cast doubt upon the primary tests of your hypotheses?
7. Preliminary Results: The extent of the results provided will differ across students based on the project and discussions with me.

- It should be sent by email up to 11:59 am (noon) of the day before the presentation.

Class participation (individual task): 10%

PROFESSOR - EMAIL