



Master Colloquium on
“Economic Growth”
Summer Term 2025

The colloquium on “Economic Growth” is aimed at all master students currently attending the lecture E453b on “Economic Growth”. Topics include development and growth economics as well as natural resource and environmental economics.

Registration: You have to register online via ILIAS. The application is open from Friday, April 25, 11 a.m. until Monday, April 28, 11.59 p.m. The places are limited to 24 participants. The topics and places are allocated on a first-come-first-serve basis.

Organizational Meeting: There will be a mandatory kick-off meeting on Friday, April 25, at 10.15 a.m. In this meeting, we will clarify the course of the colloquium and demonstrate how to give a rousing and stirring presentation.

Presentation: Presentations are limited to 15 minutes so that some time is left for discussion. The presentation should be very focussed, possible extensions should be postponed to the critical discussion at the end. Criteria for passing the colloquium are (i) self-dependence in preparing the presentation, (ii) clarity and persuasiveness of the presentation, and (iii) taking an active part in the discussion.

The aim of every presentation should be that fellow students understand the core of the model, i.e. the topic to be explained and the procedure to solve the model. You satisfy your task in the best possible way if you succeed in inspiring other students for the topic.

Preparation: In order to give an orientation about the key message of the model, there will be a preparatory talk with your supervisor around one week in advance to the presentation. Get in contact with your supervisor to make an appointment. The discussion of the key points of your presentation is necessary, since we might narrow down the topic: the considered model can be simplified, modified or generalized, depending on the degree of difficulty. Therefore, it is important that you have skimmed the paper before the talk.

Participants are asked to send their slides (in pdf format) two days before presentation to marit.holler@uni-tuebingen.de and manfred.stadler@uni-tuebingen.de.

Topics and References:

Topic 1: Capital Accumulation and Convergence (May 23, 2025; Supervisor: M. Holler)

1. Economic Development and Convergence in the Solow Model

Barro, R.J. and Sala-i-Martin, X. (2004), Economic Growth, Chapter 1.2.9. - 1.2.11.
and
Romer, D. (2012), Advanced Macroeconomics, Chapter 1.5

2. Green Technological Progress in the Solow Model

Brock, W.A. and Taylor, M.S. (2010), The Green Solow Model. Journal of Economic Growth 15, 127-153.

3. Logistic Population Growth in the Cass and Koopmans Model

Brida, J.G., and Accinelli, E. (2007), The Ramsey Model with Logistic Population Growth. Economics Bulletin 3, 1-8.

4. Technological Progress in the Cass and Koopmans Model

Barro, R.J. and Sala-i-Martin, X. (2004), Economic Growth, Chapter 2.3-2.5

Topic 2: Natural Resources and Sustainability (May 30, 2025; Supervisor: M. Holler)

5. Optimal Extraction of Scarce Natural Resources: The Cake-Eating Problem

Perman, R. et al. (2011), Chapter 15.

6. Water: A Replenishable but Depletable Resource

Tietenberg, T. and Lewis, L. (2012), Chapter 9.
and
IPCC (2022), Climate Change 2022: Impacts, Adaptation, and Vulnerability, Chapter 4.

7. Forests: Storable and Renewable Resources

Tietenberg, T. and Lewis, L. (2012), Chapter 12.

and

IPCC (2022), Climate Change 2022: Impacts, Adaptation, and Vulnerability, Cross-Chapter 7.

8. The Ecological Footprint

Wackernagel, M., Rees, W. (1996), Our Ecological Footprint: Reducing Human Impact on the Earth. Gabriola Island, New Society Publishers.

(<http://data.footprintnetwork.org>)

Topic 3: Endogenous Growth (June 27, 2025; Supervisor: M. Stadler)

9. Public Infrastructure Investment

Futagami, K., Morita, Y., Shibata, A. (1993), Dynamic Analysis of an Endogenous Growth Model with Public Capital. Scandinavian Journal of Economics 95, 607-625.

10. Public Infrastructure and Congestion

Irmen, A., Juehnel, J. (2009), Productive Government Expenditure and Economic Growth. Journal of Economic Surveys 23, 692-733.

11. Public Consumption

Turnovsky, S.J. (1996), Optimal Tax, Debt, and Expenditure Policies in a Growing Economy. Journal of Public Economics 60, 21-44.

12. Sustainable Development and Limits to Growth

Stokey, N.L. (1998), Are There Limits to Growth? International Economic Review 39, 1-31.

Topic 4: R&D-Based Growth (July 4, 2025; Supervisor: M. Stadler)

13. Expanding Product Variety and Growth

Grossman, G.M. and Helpman, E. (1991), Innovation and Growth in the Global Economy, Chapter 3.2.

or:

Romer, P.M. (1990), Endogenous Technological Change. Journal of Political Economy 98, 71-102.

14. Innovation, Creative Destruction and Growth

Aghion, P., Howitt, P. (1992), A Model of Growth through Creative Destruction. Econometrica 60, 323-351.

or:

Seegerstrom, P.S. (1991), Innovation, Imitation and Economic Growth. Journal of Political Economy 99, 807-827.

15. Innovation and Semi-Endogenous Scale-Invariant Growth

Seegerstrom, .P.S. (1998), Endogenous Growth without Scale Effects. American Economic Review 88, 1290-1310.

16. Education, Innovation and Endogenous Scale-Invariant Growth

Stadler, M. (2012), Engines of Growth: Education and Innovation. Review of Economics 63, 113-124.